Milliman

Milliman
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September 28, 2012

Applegate Valley Rural Fire Protection District #9/2664
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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September 28, 2012
Applegate Valley Rural Fire Protection District #9/2664

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Applegate Valley Rural Fire Protection District #9 -- #2664

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Applegate Valley Rural Fire Protection District #9 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Applegate Valley Rural Fire Protection District #9.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Applegate Valley Rural Fire Protection District #9*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.86% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.37%) | (0.37%) | (0.37%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.64%** | **6.05%** | **8.78%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.23%** | **6.54%** | **9.27%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 100%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.49% | 13.49% |
| Minimum July 1, 2015 Rate | 10.49% | 7.49% |
| Maximum July 1, 2015 Rate | 16.49% | 19.49% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.28% | 0.36% | 0.36% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.95% | 0.09% | 0.09% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,215,301 | $926,814 | ($288,487) | 131% | $365,007 | (79%) |
| 12/31/2007 | 1,368,895 | 1,038,074 | (330,821) | 132% | 405,303 | (82%) |
| 12/31/2008 | 1,108,730 | 1,158,031 | 49,301 | 96% | 431,829 | 11% |
| 12/31/2009 | 1,275,751 | 1,295,350 | 19,599 | 98% | 421,258 | 5% |
| 12/31/2010 | 1,418,875 | 1,380,228 | (38,647) | 103% | 468,252 | (8%) |
| 12/31/2011 | 1,483,793 | 1,483,736 | (57) | 100% | 461,525 | 0% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Applegate Valley Rural Fire Protection District #9*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($57) | ($38,647) |
| Allocated pooled OPSRP UAL | 7,875 | 5,814 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 7,818 | (32,833) |
| Combined valuation payroll | 461,525 | 468,252 |
| Net pension UAL as a percentage of payroll | 2% | (7%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $11,956 | $16,847 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $55,378 | $55,898 |
| Tier 1/Tier 2 valuation payroll | 399,440 | 408,331 |
| Tier 1/Tier 2 pension normal cost rate | 13.86% | 13.69% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,483,736 | $1,380,228 |
| Actuarial asset value | 1,483,793 | 1,418,875 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (57) | (38,647) |
| Tier 1/ Tier 2 Funded status | 100% | 103% |
| Combined valuation payroll | $461,525 | $468,252 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 0% | (8%) |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | (0.37%) | (0.94%) |
| Tier 1/Tier 2 active members [1] | 6 | 6 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 461,525 | 468,252 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $244,160 | $231,269 |
| 2. Employer reserves | 1,050,130 | 981,327 |
| 3. Benefits in force reserve | 189,504 | 206,279 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,483,793** | **$1,418,875** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,418,875 |
| 2. Regular employer contributions | 46,114 |
| 3. Benefit payments and expenses | (31,750) |
| 4. Adjustments [2] | 9,236 |
| 5. Interest credited | 41,318 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,483,793** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $16,177 | $17,246 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 33,494 | 33,143 |
| Tier 2 General Service | 5,707 | 5,509 |
| **Total** | **$55,378** | **$55,898** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $55,378 | $55,378 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $414,867 | $397,215 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 485,048 | 429,697 |
| ▪ Tier 2 General Service | 57,241 | 49,148 |
| ▪ **Total Active Members** | **$957,156** | **$876,060** |
| Dormant Members | 181,923 | 164,520 |
| Retired Members and Beneficiaries | 344,657 | 339,648 |
| **Total Actuarial Accrued Liability** | **$1,483,736** | **$1,380,228** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,483,736 | $1,483,736 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,483,736 | $1,380,228 |
| 2. Actuarial value of assets | 1,483,793 | 1,418,875 |
| 3. Unfunded accrued liability *(1. – 2.)* | (57) | (38,647) |
| 4. Funded percentage *(2. ÷ 1.)* | 100% | 103% |
| 5. Combined valuation payroll | $461,525 | $468,252 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 0% | (8%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($360,938) | ($29,745) | ($27,609) | ($358,802) | ($30,860) |
| December 31, 2009 | $382,624 | $29,228 | $29,366 | $382,762 | $30,324 |
| December 31, 2011 | N/A | N/A | N/A | ($24,017) | ($1,774) |
| **Total** | | | | **($57)** | **($2,310)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,380,228 |
| b. Normal cost at December 31, 2010 | 55,898 |
| c. Benefit payments during 2011 | (31,542) |
| d. Interest at 8.0% to December 31, 2011 | 113,628 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,518,212 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,518,212 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,483,736 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 34,476 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,418,875 |
| b. Contributions for 2011[1] | 46,114 |
| c. Benefit payments and expenses during 2011 | (31,750) |
| d. Interest at 8.0% to December 31, 2011 | 114,085 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,547,324 |
| 5. Actuarial value of assets at December 31, 2011 | 1,483,793 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (63,531) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($29,055)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($38,647)** |
| 2. Expected increase | 9,535 |
| 3. Liability (gain)/loss | (34,476) |
| 4. Asset (gain)/loss | 63,531 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($57)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $16,177 | $99,123 | 16.32% | $17,246 | $106,803 | 16.15% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 33,494 | 256,151 | 13.08% | 33,143 | 258,095 | 12.84% |
| Tier 2 General Service | 5,707 | 44,166 | 12.92% | 5,509 | 43,433 | 12.68% |
| **Total** | **$55,378** | **$399,440** | **13.86%** | **$55,898** | **$408,331** | **13.69%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($57) | ($38,647) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (2,310) | (4,973) |
| 3. Combined valuation payroll | 461,525 | 468,252 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (0.50%) | (1.06%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.86% | 13.69% |
| b. Tier 1/Tier 2 UAL rate | (0.50%) | (1.06%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 13.49% | 12.75% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 13.49% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.49% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.70% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 100% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.49% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.49% |
| 7. | July 1, 2013 total pension rate, before adjustment | 13.49% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (0.50%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.50%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.49% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.86% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.86% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.49% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.86% | 13.69% |
| b. Tier 1/Tier 2 UAL rate | (0.50%) | (1.06%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 13.49% | 12.75% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $99,123 | $99,123 |
| Tier 2 | 44,166 | 256,151 | 300,317 |
| Tier 1/Tier 2 valuation payroll | 44,166 | 355,274 | 399,440 |
| OPSRP valuation payroll | 0 | 62,085 | 62,085 |
| **Combined valuation payroll** | **$44,166** | **$417,359** | **$461,525** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 1 | 4 | 1 | 6 | 1 | 4 | 1 | 6 |
| Total | 1 | 5 | 1 | 7 | 1 | 5 | 1 | 7 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 1 | N/A | 1 |
| Police & Fire | 2 | 4 | N/A | 6 | 2 | 4 | N/A | 6 |
| Total | 2 | 4 | N/A | 6 | 2 | 5 | N/A | 7 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| Police & Fire | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **5** | **10** | **1** | **16** | **5** | **11** | **1** | **17** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 1 | | | | | | | | 1 |
| 35-39 | | | 1 | | | | | | | 1 |
| 40-44 | | | 1 | | | | | | | 1 |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | 1 | | | | | | 1 |
| 55-59 | | 1 | 1 | | | | | | | 2 |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | 2 | 3 | 1 | | | | | | 6 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | 1 | 374 |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 1,091 |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 2 | 733 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 2,039 |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 1 | 2,039 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Banks Fire District #13/2702
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
Banks Fire District #13/2702

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Banks Fire District #13/2702

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Banks Fire District #13 -- #2702

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Banks Fire District #13 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Banks Fire District #13.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Banks Fire District #13*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 14.20% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.94% | 2.94% | 2.94% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.29%** | **9.36%** | **12.09%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.88%** | **9.85%** | **12.58%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 82%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.14% | 17.14% |
| Minimum July 1, 2015 Rate | 13.71% | 10.28% |
| Maximum July 1, 2015 Rate | 20.57% | 24.00% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.80% | 2.63% | 2.63% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.83% | 3.63% | 3.63% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $412,689 | $401,294 | ($11,394) | 103% | $129,074 | (9%) |
| 12/31/2007 | 442,515 | 423,754 | (18,761) | 104% | 139,618 | (13%) |
| 12/31/2008 | 339,877 | 457,508 | 117,631 | 74% | 146,158 | 80% |
| 12/31/2009 | 399,672 | 467,019 | 67,346 | 86% | 154,254 | 44% |
| 12/31/2010 | 446,830 | 511,823 | 64,993 | 87% | 159,008 | 41% |
| 12/31/2011 | 458,745 | 561,533 | 102,788 | 82% | 169,149 | 61% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Banks Fire District #13*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $102,788 | $64,993 |
| Allocated pooled OPSRP UAL | 2,886 | 1,974 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 105,674 | 66,967 |
| Combined valuation payroll | 169,149 | 159,008 |
| Net pension UAL as a percentage of payroll | 62% | 42% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $4,382 | $5,721 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $24,022 | $21,233 |
| Tier 1/Tier 2 valuation payroll | 169,149 | 159,008 |
| Tier 1/Tier 2 pension normal cost rate | 14.20% | 13.35% |
| Tier 1/ Tier 2 Actuarial accrued liability | $561,533 | $511,823 |
| Actuarial asset value | 458,745 | 446,830 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 102,788 | 64,993 |
| Tier 1/ Tier 2 Funded status | 82% | 87% |
| Combined valuation payroll | $169,149 | $159,008 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 61% | 41% |
| Tier 1/Tier 2 UAL rate | 2.94% | 3.08% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### OPSRP

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### Retiree Healthcare

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 169,149 | 159,008 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $33,737 | $33,851 |
| 2. Employer reserves | 280,434 | 254,418 |
| 3. Benefits in force reserve | 144,575 | 158,562 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$458,745** | **$446,830** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $446,830 |
| 2. Regular employer contributions | 19,995 |
| 3. Benefit payments and expenses | (24,222) |
| 4. Adjustments[2] | 5,829 |
| 5. Interest credited | 10,313 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$458,745** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $13,110 | $12,540 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 8,805 | 6,662 |
| Tier 2 General Service | 2,107 | 2,031 |
| **Total** | **$24,022** | **$21,233** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $24,022 | $24,022 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $156,304 | $135,632 |
| ▪ Tier 1 General Service | 11,806 | 10,888 |
| ▪ Tier 2 Police & Fire | 102,350 | 79,392 |
| ▪ Tier 2 General Service | 28,130 | 24,830 |
| ▪ **Total Active Members** | **$298,590** | **$250,742** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 262,943 | 261,081 |
| **Total Actuarial Accrued Liability** | **$561,533** | **$511,823** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $561,533 | $561,533 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $561,533 | $511,823 |
| 2. Actuarial value of assets | 458,745 | 446,830 |
| 3. Unfunded accrued liability *(1. – 2.)* | 102,788 | 64,993 |
| 4. Funded percentage *(2. ÷ 1.)* | 82% | 87% |
| 5. Combined valuation payroll | $169,149 | $159,008 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 61% | 41% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($43,839) | ($3,613) | ($3,353) | ($43,579) | ($3,748) |
| December 31, 2009 | $111,634 | $8,527 | $8,568 | $111,675 | $8,847 |
| December 31, 2011 | N/A | N/A | N/A | $34,692 | $2,562 |
| **Total** | | | | **$102,788** | **$7,661** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $511,823 |
| b. Normal cost at December 31, 2010 | 21,233 |
| c. Benefit payments during 2011 | (24,064) |
| d. Interest at 8.0% to December 31, 2011 | 41,682 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 550,674 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 550,674 |
| 2. Actuarial accrued liability at December 31, 2011 | 561,533 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (10,859) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 446,830 |
| b. Contributions for 2011[1] | 19,995 |
| c. Benefit payments and expenses during 2011 | (24,222) |
| d. Interest at 8.0% to December 31, 2011 | 35,577 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 478,181 |
| 5. Actuarial value of assets at December 31, 2011 | 458,745 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (19,436) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($30,295)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$64,993** |
| 2. Expected increase | 7,500 |
| 3. Liability (gain)/loss | 10,859 |
| 4. Asset (gain)/loss | 19,436 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$102,788** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $13,110 | $77,799 | 16.85% | $12,540 | $75,540 | 16.60% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 8,805 | 71,686 | 12.28% | 6,662 | 63,840 | 10.44% |
| Tier 2 General Service | 2,107 | 19,664 | 10.72% | 2,031 | 19,628 | 10.35% |
| **Total** | **$24,022** | **$169,149** | **14.20%** | **$21,233** | **$159,008** | **13.35%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $102,788 | $64,993 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 7,661 | 4,707 |
| 3. Combined valuation payroll | 169,149 | 159,008 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.53% | 2.96% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.20% | 13.35% |
| b. Tier 1/Tier 2 UAL rate | 4.53% | 2.96% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 18.86% | 16.43% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 14.14% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.14% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.83% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 82% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.14% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 17.14% |
| 7. July 1, 2013 total pension rate, before adjustment | 18.86% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.72%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.53% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.81% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.14% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 14.20% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.20% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.14% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.20% | 13.35% |
| b. Tier 1/Tier 2 UAL rate | 2.81% | 2.96% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 17.14% | 16.43% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $77,799 | $77,799 |
| Tier 2 | 19,664 | 71,686 | 91,350 |
| Tier 1/Tier 2 valuation payroll | 19,664 | 149,485 | 169,149 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$19,664** | **$149,485** | **$169,149** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Total | 1 | 2 | 0 | 3 | 1 | 2 | 0 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Total | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **5** | **2** | **0** | **7** | **5** | **2** | **0** | **7** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | 1 | | | | | | **1** |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | 1 | | | | | | **1** |
| **55-59** | | | 1 | | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | **2** | | | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | 2 | 685 |
| **70-74** | 1 | 485 |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 3 | 618 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Bend Parks & Recreation/2596
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Bend Parks & Recreation/2596

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Bend Parks & Recreation -- #2596

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Bend Parks & Recreation to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Bend Parks & Recreation.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Bend Parks & Recreation*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.84% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.47% | 2.47% | 2.47% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.46%** | **8.89%** | **11.62%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.05%** | **9.38%** | **12.11%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 85%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.31% | 11.31% |
| Minimum July 1, 2015 Rate | 8.31% | 5.31% |
| Maximum July 1, 2015 Rate | 14.31% | 17.31% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 29 | 26 |
| Amortization factor | 16.935 | 15.906 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.31% | 1.09% | 1.09% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.31% | 2.47% | 2.47% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $10,729,983 | $9,535,387 | ($1,194,596) | 113% | $4,309,580 | (28%) |
| 12/31/2007 | 11,473,155 | 9,879,326 | (1,593,829) | 116% | 4,639,861 | (34%) |
| 12/31/2008 | 9,216,475 | 10,663,648 | 1,447,173 | 86% | 5,256,904 | 28% |
| 12/31/2009 | 10,568,000 | 11,449,834 | 881,834 | 92% | 5,573,280 | 16% |
| 12/31/2010 | 11,873,968 | 12,796,796 | 922,828 | 93% | 5,742,374 | 16% |
| 12/31/2011 | 11,574,356 | 13,624,264 | 2,049,908 | 85% | 5,084,185 | 40% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Bend Parks & Recreation*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $2,049,908 | $922,828 |
| Allocated pooled OPSRP UAL | 86,748 | 71,299 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,136,656 | 994,127 |
| Combined valuation payroll | 5,084,185 | 5,742,374 |
| Net pension UAL as a percentage of payroll | 42% | 17% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $131,708 | $206,602 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $246,705 | $226,839 |
| Tier 1/Tier 2 valuation payroll | 2,790,907 | 3,019,748 |
| Tier 1/Tier 2 pension normal cost rate | 8.84% | 7.51% |
| Tier 1/ Tier 2 Actuarial accrued liability | $13,624,264 | $12,796,796 |
| Actuarial asset value | 11,574,356 | 11,873,968 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 2,049,908 | 922,828 |
| Tier 1/ Tier 2 Funded status | 85% | 93% |
| Combined valuation payroll | $5,084,185 | $5,742,374 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 40% | 16% |
| Tier 1/Tier 2 UAL rate | 2.47% | 1.13% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 57 | 67 |
| Tier 1/Tier 2 dormant members | 64 | 55 |
| Tier 1/Tier 2 retirees and beneficiaries | 57 | 52 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 5,084,185 | 5,742,374 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $2,637,116 | $3,096,762 |
| 2. Employer reserves | 6,390,942 | 6,855,463 |
| 3. Benefits in force reserve | 2,546,298 | 1,921,743 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$11,574,356** | **$11,873,968** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $11,873,968 |
| 2. | Regular employer contributions | 171,987 |
| 3. | Benefit payments and expenses | (426,615) |
| 4. | Adjustments[2] | (445,825) |
| 5. | Interest credited | 400,840 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$11,574,356** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 118,439 | 102,467 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 128,266 | 124,372 |
| **Total** | **$246,705** | **$226,839** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $246,705 | $246,705 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 5,176,134 | 6,561,954 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 1,651,632 | 1,472,485 |
| ▪ **Total Active Members** | **$6,827,766** | **$8,034,439** |
| Dormant Members | 2,165,454 | 1,598,106 |
| Retired Members and Beneficiaries | 4,631,044 | 3,164,251 |
| **Total Actuarial Accrued Liability** | **$13,624,264** | **$12,796,796** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $13,624,264 | $13,624,264 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $13,624,264 | $12,796,796 |
| 2. Actuarial value of assets | 11,574,356 | 11,873,968 |
| 3. Unfunded accrued liability *(1. – 2.)* | 2,049,908 | 922,828 |
| 4. Funded percentage *(2. ÷ 1.)* | 85% | 93% |
| 5. Combined valuation payroll | $5,084,185 | $5,742,374 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 40% | 16% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($2,056,350) | ($169,465) | ($157,294) | ($2,044,179) | ($175,820) |
| December 31, 2009 | $2,952,391 | $225,532 | $226,591 | $2,953,450 | $233,989 |
| December 31, 2011 | N/A | N/A | N/A | $1,140,637 | $84,236 |
| **Total** | | | | **$2,049,908** | **$142,405** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $12,796,796 |
| b. Normal cost at December 31, 2010 | 226,839 |
| c. Benefit payments during 2011 | (423,818) |
| d. Interest at 8.0% to December 31, 2011 | 1,024,938 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 13,624,755 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 13,624,755 |
| 2. Actuarial accrued liability at December 31, 2011 | 13,624,264 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 491 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 11,873,968 |
| b. Contributions for 2011[1] | 171,987 |
| c. Benefit payments and expenses during 2011 | (426,615) |
| d. Interest at 8.0% to December 31, 2011 | 939,732 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 12,559,073 |
| 5. Actuarial value of assets at December 31, 2011 | 11,574,356 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (984,717) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($984,226)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$922,828** |
| 2. Expected increase | 142,854 |
| 3. Liability (gain)/loss | (491) |
| 4. Asset (gain)/loss | 984,717 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$2,049,908** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 118,439 | 1,566,831 | 7.56% | 102,467 | 1,790,328 | 5.72% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 128,266 | 1,224,076 | 10.48% | 124,372 | 1,229,420 | 10.12% |
| **Total** | **$246,705** | **$2,790,907** | **8.84%** | **$226,839** | **$3,019,748** | **7.51%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $2,049,908 | $922,828 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 142,405 | 58,045 |
| 3. Combined valuation payroll | 5,084,185 | 5,742,374 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.80% | 1.01% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.84% | 7.51% |
| b. Tier 1/Tier 2 UAL rate | 2.80% | 1.01% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 11.77% | 8.64% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 8.31% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.31% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.66% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 85% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.31% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.31% |
| 7. | July 1, 2013 total pension rate, before adjustment | 11.77% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.46%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.80% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.34% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.31% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.84% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.84% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.31% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.84% | 7.51% |
| b. Tier 1/Tier 2 UAL rate | 2.34% | 1.01% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 11.31% | 8.64% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,566,831 | $0 | $1,566,831 |
| Tier 2 | 1,224,076 | 0 | 1,224,076 |
| Tier 1/Tier 2 valuation payroll | 2,790,907 | 0 | 2,790,907 |
| OPSRP valuation payroll | 2,293,278 | 0 | 2,293,278 |
| **Combined valuation payroll** | **$5,084,185** | **$0** | **$5,084,185** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 29 | 28 | 94 | 151 | 34 | 33 | 186 | 253 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 29 | 28 | 94 | 151 | 34 | 33 | 186 | 253 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 35 | 55 | N/A | 90 | 47 | 70 | N/A | 117 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 35 | 55 | N/A | 90 | 47 | 70 | N/A | 117 |
| **Dormant Members** | | | | | | | | |
| General Service | 30 | 34 | 11 | 75 | 25 | 29 | 7 | 61 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 30 | 34 | 11 | 75 | 25 | 30 | 7 | 62 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 52 | 5 | 0 | 57 | 48 | 4 | 0 | 52 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 52 | 5 | 0 | 57 | 48 | 4 | 0 | 52 |
| **Grand Total Number of Members** | **146** | **122** | **105** | **373** | **154** | **137** | **193** | **484** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | 2 | | | | | | | | 2 |
| 30-34 | | 1 | 1 | | | | | | | 2 |
| 35-39 | | 2 | 2 | 1 | 1 | | | | | 6 |
| 40-44 | 1 | 2 | 3 | 3 | | | | | | 9 |
| 45-49 | | 1 | 1 | 4 | 1 | 1 | | | | 8 |
| 50-54 | | 3 | 4 | 3 | 1 | | | | | 11 |
| 55-59 | | 3 | 3 | 3 | | 3 | | | | 12 |
| 60-64 | | | | 3 | 3 | | | | | 6 |
| 65-69 | | | | | | 1 | | | | 1 |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | 1 | 14 | 14 | 17 | 6 | 5 | | | | 57 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | 4 | 211 |
| 30-34 | 1 | 201 |
| 35-39 | 9 | 313 |
| 40-44 | 10 | 432 |
| 45-49 | 6 | 964 |
| 50-54 | 8 | 39 |
| 55-59 | 18 | 401 |
| 60-64 | 7 | 483 |
| 65-69 | 1 | 12 |
| 70-74 | | |
| 75+ | | |
| Total | 64 | 389 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | 1 | 39 |
| 50-54 | 3 | 945 |
| 55-59 | 8 | 19 |
| 60-64 | 23 | 737 |
| 65-69 | 15 | 279 |
| 70-74 | 4 | 1,055 |
| 75-79 | 2 | 406 |
| 80-84 | | |
| 85-89 | 1 | 613 |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 57 | 523 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Black Butte Ranch Rural Fire Protection District/2648
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Black Butte Ranch Rural Fire Protection District/2648

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Black Butte Ranch Rural Fire Protection District -- #2648

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Black Butte Ranch Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Black Butte Ranch Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Black Butte Ranch Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 18.91% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (7.20%) | (7.20%) | (7.20%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.86%** | **0.00%** | **1.95%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.45%** | **0.49%** | **2.44%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 98%.

| **Funded Status as of December 31, 2013** | **80% to 120%** | **Under 70% or Over 130%** |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.71% | 11.71% |
| Minimum July 1, 2015 Rate | 8.71% | 5.71% |
| Maximum July 1, 2015 Rate | 14.71% | 17.71% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 1 |
| Amortization factor | 17.175 | 0.897 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.71% | (8.89%) | (8.89%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 19.75% | 0.84% | 0.84% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $3,423,013 | $2,559,954 | ($863,059) | 134% | $424,881 | (203%) |
| 12/31/2007 | 3,664,039 | 2,761,114 | (902,925) | 133% | 532,304 | (170%) |
| 12/31/2008 | 2,771,033 | 2,798,195 | 27,162 | 99% | 493,884 | 6% |
| 12/31/2009 | 3,179,320 | 3,130,088 | (49,232) | 102% | 518,846 | (9%) |
| 12/31/2010 | 3,440,032 | 3,355,979 | (84,053) | 103% | 594,334 | (14%) |
| 12/31/2011 | 3,324,045 | 3,404,058 | 80,013 | 98% | 618,314 | 13% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Black Butte Ranch Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $80,013 | ($84,053) |
| Allocated pooled OPSRP UAL | 10,550 | 7,379 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 90,563 | (76,674) |
| Combined valuation payroll | 618,314 | 594,334 |
| Net pension UAL as a percentage of payroll | 15% | (13%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $16,018 | $21,383 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $60,166 | $65,715 |
| Tier 1/Tier 2 valuation payroll | 318,181 | 375,450 |
| Tier 1/Tier 2 pension normal cost rate | 18.91% | 17.50% |
| Tier 1/ Tier 2 Actuarial accrued liability | $3,404,058 | $3,355,979 |
| Actuarial asset value | 3,324,045 | 3,440,032 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 80,013 | (84,053) |
| Tier 1/ Tier 2 Funded status | 98% | 103% |
| Combined valuation payroll | $618,314 | $594,334 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 13% | (14%) |
| Tier 1/Tier 2 UAL rate | (7.20%) | (5.79%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 4 |
| Tier 1/Tier 2 dormant members | 3 | 4 |
| Tier 1/Tier 2 retirees and beneficiaries | 10 | 9 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 618,314 | 594,334 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $420,018 | $564,496 |
| 2. Employer reserves | 1,947,432 | 2,011,894 |
| 3. Benefits in force reserve | 956,595 | 863,642 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$3,324,045** | **$3,440,032** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $3,440,032 |
| 2. | Regular employer contributions | (4,839) |
| 3. | Benefit payments and expenses | (160,271) |
| 4. | Adjustments [2] | (42,418) |
| 5. | Interest credited | 91,540 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$3,324,045** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $42,574 | $40,528 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 17,592 | 16,466 |
| Tier 2 General Service | 0 | 8,721 |
| **Total** | **$60,166** | **$65,715** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $60,166 | $60,166 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $1,207,470 | $1,109,253 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 230,791 | 199,001 |
| ▪ Tier 2 General Service | 0 | 132,037 |
| ▪ **Total Active Members** | **$1,438,261** | **$1,440,291** |
| Dormant Members | 226,004 | 493,656 |
| Retired Members and Beneficiaries | 1,739,793 | 1,422,032 |
| **Total Actuarial Accrued Liability** | **$3,404,058** | **$3,355,979** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $3,404,058 | $3,404,058 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $3,404,058 | $3,355,979 |
| 2. Actuarial value of assets | 3,324,045 | 3,440,032 |
| 3. Unfunded accrued liability *(1. – 2.)* | 80,013 | (84,053) |
| 4. Funded percentage *(2. ÷ 1.)* | 98% | 103% |
| 5. Combined valuation payroll | $618,314 | $594,334 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 13% | (14%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($915,598) | ($75,456) | ($70,036) | ($910,178) | ($78,286) |
| December 31, 2009 | $871,364 | $66,563 | $66,876 | $871,677 | $69,059 |
| December 31, 2011 | N/A | N/A | N/A | $118,514 | $8,752 |
| **Total** | | | | **$80,013** | **($475)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,355,979 |
| b. Normal cost at December 31, 2010 | 65,715 |
| c. Benefit payments during 2011 | (159,220) |
| d. Interest at 8.0% to December 31, 2011 | 267,367 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,529,841 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,529,841 |
| 2. Actuarial accrued liability at December 31, 2011 | 3,404,058 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 125,783 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,440,032 |
| b. Contributions for 2011[1] | (4,839) |
| c. Benefit payments and expenses during 2011 | (160,271) |
| d. Interest at 8.0% to December 31, 2011 | 268,598 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,543,521 |
| 5. Actuarial value of assets at December 31, 2011 | 3,324,045 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (219,476) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($93,693)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($84,053)** |
| 2. Expected increase | 70,373 |
| 3. Liability (gain)/loss | (125,783) |
| 4. Asset (gain)/loss | 219,476 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$80,013** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $42,574 | $213,412 | 19.95% | $40,528 | $211,821 | 19.13% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 17,592 | 104,769 | 16.79% | 16,466 | 100,321 | 16.41% |
| Tier 2 General Service | 0 | 0 | 0.00% | 8,721 | 63,308 | 13.78% |
| **Total** | **$60,166** | **$318,181** | **18.91%** | **$65,715** | **$375,450** | **17.50%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $80,013 | ($84,053) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (475) | (11,834) |
| 3. Combined valuation payroll | 618,314 | 594,334 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (0.08%) | (1.99%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 18.91% | 17.50% |
| b. Tier 1/Tier 2 UAL rate | (0.08%) | (1.99%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 18.96% | 15.63% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 98% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 18.96% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (7.25%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (0.08%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (7.33%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.71% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 18.91% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 18.91% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 18.91% | 17.50% |
| b. Tier 1/Tier 2 UAL rate | (7.33%) | (5.91%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 11.71% | 11.71% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $213,412 | $213,412 |
| Tier 2 | 0 | 104,769 | 104,769 |
| Tier 1/Tier 2 valuation payroll | 0 | 318,181 | 318,181 |
| OPSRP valuation payroll | 0 | 300,133 | 300,133 |
| **Combined valuation payroll** | **$0** | **$618,314** | **$618,314** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Police & Fire | 2 | 1 | 4 | 7 | 2 | 1 | 3 | 6 |
| Total | 2 | 1 | 4 | 7 | 2 | 2 | 3 | 7 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 4 | 2 | N/A | 6 | 4 | 2 | N/A | 6 |
| Total | 4 | 2 | N/A | 6 | 4 | 2 | N/A | 6 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 2 | 1 | 0 | 3 | 3 | 1 | 0 | 4 |
| Total | 2 | 1 | 0 | 3 | 3 | 1 | 0 | 4 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 9 | 0 | 0 | 9 | 8 | 0 | 0 | 8 |
| Total | 10 | 0 | 0 | 10 | 9 | 0 | 0 | 9 |
| **Grand Total Number of Members** | **18** | **4** | **4** | **26** | **18** | **5** | **3** | **26** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | 1 | | | | | | **1** |
| **45-49** | | 1 | | | 1 | | | | | **2** |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | | **1** | **1** | | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 2 | 1,430 |
| **40-44** | | |
| **45-49** | | |
| **50-54** | 1 | 642 |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 3 | 1,167 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 1,602 |
| **55-59** | 1 | 567 |
| **60-64** | 2 | 1,524 |
| **65-69** | 2 | 1,723 |
| **70-74** | 3 | 647 |
| **75-79** | | |
| **80-84** | 1 | 387 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 10 | 1,099 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Boardman Rural Fire Protection District/2833
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Boardman Rural Fire Protection District/2833

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,


Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary


**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Boardman Rural Fire Protection District -- #2833

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Boardman Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Boardman Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Boardman Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 17.49% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.44% | 0.44% | 0.44% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **18.08%** | **6.86%** | **9.59%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **18.67%** | **7.35%** | **10.08%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 92%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.93% | 17.93% |
| Minimum July 1, 2015 Rate | 14.34% | 10.75% |
| Maximum July 1, 2015 Rate | 21.52% | 25.11% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.64% | 0.10% | 0.10% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.93% | 0.44% | 0.44% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $182,943 | $134,637 | ($48,306) | 136% | $142,775 | (34%) |
| 12/31/2007 | 203,037 | 143,783 | (59,254) | 141% | 176,812 | (34%) |
| 12/31/2008 | 150,740 | 161,496 | 10,756 | 93% | 185,182 | 6% |
| 12/31/2009 | 188,954 | 189,184 | 230 | 100% | 194,424 | 0% |
| 12/31/2010 | 219,141 | 218,028 | (1,113) | 101% | 342,071 | 0% |
| 12/31/2011 | 232,340 | 251,708 | 19,368 | 92% | 318,829 | 6% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Boardman Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $19,368 | ($1,113) |
| Allocated pooled OPSRP UAL | 5,440 | 4,247 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 24,808 | 3,134 |
| Combined valuation payroll | 318,829 | 342,071 |
| Net pension UAL as a percentage of payroll | 8% | 1% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $8,259 | $12,307 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $13,230 | $13,294 |
| Tier 1/Tier 2 valuation payroll | 75,642 | 71,514 |
| Tier 1/Tier 2 pension normal cost rate | 17.49% | 18.59% |
| Tier 1/ Tier 2 Actuarial accrued liability | $251,708 | $218,028 |
| Actuarial asset value | 232,340 | 219,141 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 19,368 | (1,113) |
| Tier 1/ Tier 2 Funded status | 92% | 101% |
| Combined valuation payroll | $318,829 | $342,071 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 6% | 0% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 0.44% | (0.02%) |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 318,829 | 342,071 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $32,081 | $31,982 |
| 2. Employer reserves | 200,259 | 187,159 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$232,340** | **$219,141** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $219,141 |
| 2. | Regular employer contributions | 9,032 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments [2] | 117 |
| 5. | Interest credited | 4,050 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$232,340** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 13,230 | 13,294 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$13,230** | **$13,294** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $13,230 | $13,230 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 251,708 | 218,028 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$251,708** | **$218,028** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$251,708** | **$218,028** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $251,708 | $251,708 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $251,708 | $218,028 |
| 2. Actuarial value of assets | 232,340 | 219,141 |
| 3. Unfunded accrued liability *(1. – 2.)* | 19,368 | (1,113) |
| 4. Funded percentage *(2. ÷ 1.)* | 92% | 101% |
| 5. Combined valuation payroll | $318,829 | $342,071 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 6% | 0% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($64,837) | ($5,342) | ($4,960) | ($64,455) | ($5,542) |
| December 31, 2009 | $65,431 | $4,999 | $5,022 | $65,454 | $5,186 |
| December 31, 2011 | N/A | N/A | N/A | $18,369 | $1,357 |
| **Total** | | | | **$19,368** | **$1,001** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $218,028 |
| b. Normal cost at December 31, 2010 | 13,294 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 18,506 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 249,828 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 249,828 |
| 2. Actuarial accrued liability at December 31, 2011 | 251,708 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (1,880) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 219,141 |
| b. Contributions for 2011[1] | 9,032 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 17,893 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 246,066 |
| 5. Actuarial value of assets at December 31, 2011 | 232,340 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (13,726) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($15,606)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($1,113)** |
| 2. Expected increase | 4,875 |
| 3. Liability (gain)/loss | 1,880 |
| 4. Asset (gain)/loss | 13,726 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$19,368** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 13,230 | 75,642 | 17.49% | 13,294 | 71,514 | 18.59% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$13,230** | **$75,642** | **17.49%** | **$13,294** | **$71,514** | **18.59%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $19,368 | ($1,113) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 1,001 | (469) |
| 3. Combined valuation payroll | 318,829 | 342,071 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.31% | (0.14%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 17.49% | 18.59% |
| b. Tier 1/Tier 2 UAL rate | 0.31% | (0.14%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.93% | 18.57% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 17.17% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 17.17% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.43% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.43% |
| c. Funded percentage | 92% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.43% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 13.74% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 20.60% |
| 7. July 1, 2013 total pension rate, before adjustment | 17.93% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.31% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.31% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.93% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 17.49% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 17.49% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.93% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 17.49% | 18.59% |
| b. Tier 1/Tier 2 UAL rate | 0.31% | (0.14%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 17.93% | 18.57% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 75,642 | 75,642 |
| Tier 1/Tier 2 valuation payroll | 0 | 75,642 | 75,642 |
| OPSRP valuation payroll | 31,423 | 211,764 | 243,187 |
| **Combined valuation payroll** | **$31,423** | **$287,406** | **$318,829** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Police & Fire | 0 | 1 | 5 | 6 | 0 | 1 | 6 | 7 |
| Total | 0 | 1 | 6 | 7 | 0 | 1 | 7 | 8 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **2** | **6** | **8** | **0** | **2** | **7** | **9** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | 1 | | | | | | | 1 |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | 1 | | | | | | | 1 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Brownsville Rural Fire Protection District/2779
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Brownsville Rural Fire Protection District/2779

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Brownsville Rural Fire Protection District -- #2779

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Brownsville Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Brownsville Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Brownsville Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 15.53% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.51% | 0.51% | 0.51% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.19%** | **6.93%** | **9.66%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **16.78%** | **7.42%** | **10.15%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 89%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.04% | 16.04% |
| Minimum July 1, 2015 Rate | 12.83% | 9.62% |
| Maximum July 1, 2015 Rate | 19.25% | 22.46% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.25% | 0.37% | 0.37% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.43% | 2.90% | 2.90% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $273,755 | $215,370 | ($58,385) | 127% | $60,093 | (97%) |
| 12/31/2007 | 304,768 | 232,997 | (71,771) | 131% | 64,448 | (111%) |
| 12/31/2008 | 223,089 | 250,636 | 27,547 | 89% | 66,164 | 42% |
| 12/31/2009 | 277,778 | 281,218 | 3,440 | 99% | 69,979 | 5% |
| 12/31/2010 | 316,335 | 333,084 | 16,749 | 95% | 75,225 | 22% |
| 12/31/2011 | 334,703 | 375,388 | 40,685 | 89% | 84,296 | 48% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Brownsville Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $40,685 | $16,749 |
| Allocated pooled OPSRP UAL | 1,438 | 934 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 42,123 | 17,683 |
| Combined valuation payroll | 84,296 | 75,225 |
| Net pension UAL as a percentage of payroll | 50% | 24% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,184 | $2,706 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $13,091 | $11,228 |
| Tier 1/Tier 2 valuation payroll | 84,296 | 75,225 |
| Tier 1/Tier 2 pension normal cost rate | 15.53% | 14.93% |
| Tier 1/ Tier 2 Actuarial accrued liability | $375,388 | $333,084 |
| Actuarial asset value | 334,703 | 316,335 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 40,685 | 16,749 |
| Tier 1/ Tier 2 Funded status | 89% | 95% |
| Combined valuation payroll | $84,296 | $75,225 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 48% | 22% |
| Tier 1/Tier 2 UAL rate | 0.51% | 1.11% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 84,296 | 75,225 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $73,604 | $70,029 |
| 2. Employer reserves | 261,099 | 246,306 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$334,703** | **$316,335** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $316,335 |
| 2. | Regular employer contributions | 9,124 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments [2] | (734) |
| 5. | Interest credited | 9,977 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$334,703** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 13,091 | 11,228 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$13,091** | **$11,228** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $13,091 | $13,091 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $232,057 | $220,286 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 143,331 | 112,798 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$375,388** | **$333,084** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$375,388** | **$333,084** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $375,388 | $375,388 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $375,388 | $333,084 |
| 2. Actuarial value of assets | 334,703 | 316,335 |
| 3. Unfunded accrued liability *(1. – 2.)* | 40,685 | 16,749 |
| 4. Funded percentage *(2. ÷ 1.)* | 89% | 95% |
| 5. Combined valuation payroll | $84,296 | $75,225 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 48% | 22% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($81,479) | ($6,715) | ($6,232) | ($80,996) | ($6,967) |
| December 31, 2009 | $85,387 | $6,523 | $6,553 | $85,417 | $6,768 |
| December 31, 2011 | N/A | N/A | N/A | $36,264 | $2,678 |
| **Total** | | | | **$40,685** | **$2,479** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $333,084 |
| b. Normal cost at December 31, 2010 | 11,228 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 27,545 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 371,857 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 371,857 |
| 2. Actuarial accrued liability at December 31, 2011 | 375,388 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (3,531) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 316,335 |
| b. Contributions for 2011[1] | 9,124 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 25,672 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 351,131 |
| 5. Actuarial value of assets at December 31, 2011 | 334,703 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (16,428) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($19,959)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$16,749** |
| 2. Expected increase | 3,977 |
| 3. Liability (gain)/loss | 3,531 |
| 4. Asset (gain)/loss | 16,428 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$40,685** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 13,091 | 84,296 | 15.53% | 11,228 | 75,225 | 14.93% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$13,091** | **$84,296** | **15.53%** | **$11,228** | **$75,225** | **14.93%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $40,685 | $16,749 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 2,479 | 756 |
| 3. Combined valuation payroll | 84,296 | 75,225 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.94% | 1.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 15.53% | 14.93% |
| b. Tier 1/Tier 2 UAL rate | 2.94% | 1.00% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 18.60% | 16.05% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 13.04% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.04% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.61% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 89% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.04% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.04% |
| 7. July 1, 2013 total pension rate, before adjustment | 18.60% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.56%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.94% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.38% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.04% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 15.53% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 15.53% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 15.53% | 14.93% |
| b. Tier 1/Tier 2 UAL rate | 0.38% | 0.99% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.04% | 16.04% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 84,296 | 84,296 |
| Tier 1/Tier 2 valuation payroll | 0 | 84,296 | 84,296 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$0** | **$84,296** | **$84,296** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Total | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **1** | **1** | **0** | **2** | **1** | **1** | **0** | **2** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | 1 | | | | | | | 1 |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | 1 | | | | | | | 1 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Central Oregon Intergovernmental Council/2569
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Central Oregon Intergovernmental Council/2569

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Central Oregon Intergovernmental Council -- #2569

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Central Oregon Intergovernmental Council to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Central Oregon Intergovernmental Council.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Central Oregon Intergovernmental Council*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.98% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.33% | 2.33% | 2.33% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **12.46%** | **8.75%** | **11.48%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.05%** | **9.24%** | **11.97%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 87%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.31% | 12.31% |
| Minimum July 1, 2015 Rate | 9.31% | 6.31% |
| Maximum July 1, 2015 Rate | 15.31% | 18.31% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 21 | 30 |
| Amortization factor | 13.843 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.70% | 1.43% | 1.43% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.31% | 2.33% | 2.33% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $8,783,128 | $8,202,575 | ($580,553) | 107% | $2,354,832 | (25%) |
| 12/31/2007 | 9,583,547 | 8,654,315 | (929,232) | 111% | 2,546,525 | (36%) |
| 12/31/2008 | 7,252,664 | 8,694,695 | 1,442,031 | 83% | 3,047,833 | 47% |
| 12/31/2009 | 8,552,656 | 9,391,954 | 839,298 | 91% | 3,654,124 | 23% |
| 12/31/2010 | 9,331,624 | 10,220,183 | 888,559 | 91% | 4,376,107 | 20% |
| 12/31/2011 | 8,900,492 | 10,248,303 | 1,347,811 | 87% | 4,384,310 | 31% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Central Oregon Intergovernmental Council*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,347,811 | $888,559 |
| Allocated pooled OPSRP UAL | 74,807 | 54,335 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,422,618 | 942,894 |
| Combined valuation payroll | 4,384,310 | 4,376,107 |
| Net pension UAL as a percentage of payroll | 32% | 22% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $113,578 | $157,445 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $210,879 | $184,197 |
| Tier 1/Tier 2 valuation payroll | 2,113,615 | 2,101,784 |
| Tier 1/Tier 2 pension normal cost rate | 9.98% | 8.76% |
| Tier 1/ Tier 2 Actuarial accrued liability | $10,248,303 | $10,220,183 |
| Actuarial asset value | 8,900,492 | 9,331,624 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,347,811 | 888,559 |
| Tier 1/ Tier 2 Funded status | 87% | 91% |
| Combined valuation payroll | $4,384,310 | $4,376,107 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 31% | 20% |
| Tier 1/Tier 2 UAL rate | 2.33% | 1.51% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 40 | 40 |
| Tier 1/Tier 2 dormant members | 35 | 29 |
| Tier 1/Tier 2 retirees and beneficiaries | 43 | 41 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 4,384,310 | 4,376,107 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,896,095 | $2,165,771 |
| 2. Employer reserves | 5,043,212 | 5,095,687 |
| 3. Benefits in force reserve | 1,961,185 | 2,070,166 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$8,900,492** | **$9,331,624** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $9,331,624 |
| 2. | Regular employer contributions | 179,625 |
| 3. | Benefit payments and expenses | (328,583) |
| 4. | Adjustments [2] | (500,481) |
| 5. | Interest credited | 218,307 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$8,900,492** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 70,532 | 57,419 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 140,347 | 126,778 |
| **Total** | **$210,879** | **$184,197** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $210,879 | $210,879 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 2,954,046 | 3,321,052 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 2,371,794 | 2,095,793 |
| ▪ **Total Active Members** | **$5,325,840** | **$5,416,845** |
| Dormant Members | 1,355,585 | 1,394,702 |
| Retired Members and Beneficiaries | 3,566,878 | 3,408,636 |
| **Total Actuarial Accrued Liability** | **$10,248,303** | **$10,220,183** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $10,248,303 | $10,248,303 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $10,248,303 | $10,220,183 |
| 2. Actuarial value of assets | 8,900,492 | 9,331,624 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,347,811 | 888,559 |
| 4. Funded percentage *(2. ÷ 1.)* | 87% | 91% |
| 5. Combined valuation payroll | $4,384,310 | $4,376,107 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 31% | 20% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,125,217) | ($92,731) | ($86,070) | ($1,118,556) | ($96,208) |
| December 31, 2009 | $1,973,362 | $150,745 | $151,452 | $1,974,069 | $156,398 |
| December 31, 2011 | N/A | N/A | N/A | $492,298 | $36,356 |
| **Total** | | | | **$1,347,811** | **$96,546** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $10,220,183 |
| b. Normal cost at December 31, 2010 | 184,197 |
| c. Benefit payments during 2011 | (326,429) |
| d. Interest at 8.0% to December 31, 2011 | 819,293 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 10,897,244 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 10,897,244 |
| 2. Actuarial accrued liability at December 31, 2011 | 10,248,303 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 648,941 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 9,331,624 |
| b. Contributions for 2011[1] | 179,625 |
| c. Benefit payments and expenses during 2011 | (328,583) |
| d. Interest at 8.0% to December 31, 2011 | 740,572 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 9,923,238 |
| 5. Actuarial value of assets at December 31, 2011 | 8,900,492 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,022,746) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($373,805)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$888,559** |
| 2. Expected increase | 85,447 |
| 3. Liability (gain)/loss | (648,941) |
| 4. Asset (gain)/loss | 1,022,746 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,347,811** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 70,532 | 804,731 | 8.76% | 57,419 | 858,011 | 6.69% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 140,347 | 1,308,884 | 10.72% | 126,778 | 1,243,773 | 10.19% |
| **Total** | **$210,879** | **$2,113,615** | **9.98%** | **$184,197** | **$2,101,784** | **8.76%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,347,811 | $888,559 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 96,546 | 60,999 |
| 3. Combined valuation payroll | 4,384,310 | 4,376,107 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.20% | 1.39% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.98% | 8.76% |
| b. Tier 1/Tier 2 UAL rate | 2.20% | 1.39% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 12.31% | 10.27% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 9.70% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.70% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.94% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 87% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 6.70% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 12.70% |
| 7. | July 1, 2013 total pension rate, before adjustment | 12.31% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.20% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.20% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.31% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.98% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.98% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.31% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.98% | 8.76% |
| b. Tier 1/Tier 2 UAL rate | 2.20% | 1.39% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 12.31% | 10.27% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $804,731 | $0 | $804,731 |
| Tier 2 | 1,308,884 | 0 | 1,308,884 |
| Tier 1/Tier 2 valuation payroll | 2,113,615 | 0 | 2,113,615 |
| OPSRP valuation payroll | 2,270,695 | 0 | 2,270,695 |
| **Combined valuation payroll** | **$4,384,310** | **$0** | **$4,384,310** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 13 | 27 | 70 | 110 | 15 | 25 | 70 | 110 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 13 | 27 | 70 | 110 | 15 | 25 | 70 | 110 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 32 | 19 | N/A | 51 | 34 | 25 | N/A | 59 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 32 | 19 | N/A | 51 | 34 | 25 | N/A | 59 |
| **Dormant Members** | | | | | | | | |
| General Service | 14 | 21 | 5 | 40 | 13 | 16 | 4 | 33 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 14 | 21 | 5 | 40 | 13 | 16 | 4 | 33 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 42 | 1 | 0 | 43 | 40 | 1 | 0 | 41 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 42 | 1 | 0 | 43 | 40 | 1 | 0 | 41 |
| **Grand Total Number of Members** | **101** | **68** | **75** | **244** | **102** | **67** | **74** | **243** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | 1 | 2 | | | | | | | 3 |
| 40-44 | | 4 | 6 | 1 | | | | | | 11 |
| 45-49 | 1 | | 1 | 1 | | | | | | 3 |
| 50-54 | | 2 | 2 | 3 | 2 | 1 | | | | 10 |
| 55-59 | | | 2 | 2 | 1 | | 1 | | | 6 |
| 60-64 | | 2 | 2 | 2 | | | | | | 6 |
| 65-69 | | | | 1 | | | | | | 1 |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | 1 | 9 | 15 | 10 | 3 | 1 | 1 | | | 40 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | 1 | |
| 40-44 | 3 | 1,090 |
| 45-49 | 6 | 307 |
| 50-54 | 6 | 431 |
| 55-59 | 8 | 245 |
| 60-64 | 4 | 502 |
| 65-69 | 4 | 671 |
| 70-74 | 2 | 80 |
| 75+ | 1 | 118 |
| Total | 35 | 418 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 4 | 1,208 |
| 60-64 | 11 | 619 |
| 65-69 | 9 | 742 |
| 70-74 | 12 | 370 |
| 75-79 | 3 | 129 |
| 80-84 | 2 | 1,375 |
| 85-89 | 2 | 62 |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 43 | 605 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Central Oregon Regional Housing Authority/2678
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Central Oregon Regional Housing Authority/2678

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Central Oregon Regional Housing Authority/2678

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

Central Oregon Regional Housing Authority -- #2678

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Central Oregon Regional Housing Authority to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Central Oregon Regional Housing Authority.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Central Oregon Regional Housing Authority*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.10% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (1.69%) | (1.69%) | (1.69%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **4.73%** | **7.46%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **5.22%** | **7.95%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 108%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 15 | 15 |
| Amortization factor | 11.011 | 10.998 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (1.40%) | (1.40%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (1.69%) | (1.69%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,587,411 | $1,286,054 | ($301,357) | 123% | $433,993 | (69%) |
| 12/31/2007 | 1,765,271 | 1,358,750 | (406,521) | 130% | 713,808 | (57%) |
| 12/31/2008 | 1,388,677 | 1,405,586 | 16,909 | 99% | 707,188 | 2% |
| 12/31/2009 | 1,673,580 | 1,552,945 | (120,635) | 108% | 768,732 | (16%) |
| 12/31/2010 | 1,865,855 | 1,680,739 | (185,116) | 111% | 684,037 | (27%) |
| 12/31/2011 | 1,912,749 | 1,768,115 | (144,634) | 108% | 812,514 | (18%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Central Oregon Regional Housing Authority*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($144,634) | ($185,116) |
| Allocated pooled OPSRP UAL | 13,863 | 8,493 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (130,771) | (176,623) |
| Combined valuation payroll | 812,514 | 684,037 |
| Net pension UAL as a percentage of payroll | (16%) | (26%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $21,049 | $24,611 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $13,670 | $13,692 |
| Tier 1/Tier 2 valuation payroll | 216,668 | 216,824 |
| Tier 1/Tier 2 pension normal cost rate | 7.10% | 7.71% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,768,115 | $1,680,739 |
| Actuarial asset value | 1,912,749 | 1,865,855 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (144,634) | (185,116) |
| Tier 1/ Tier 2 Funded status | 108% | 111% |
| Combined valuation payroll | $812,514 | $684,037 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (18%) | (27%) |
| Tier 1/Tier 2 UAL rate | (1.69%) | (2.37%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 12 | 11 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 5 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 812,514 | 684,037 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $545,103 | $530,485 |
| 2. Employer reserves | 1,278,421 | 1,237,474 |
| 3. Benefits in force reserve | 89,225 | 97,896 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,912,749** | **$1,865,855** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,865,855 |
| 2. | Regular employer contributions | 18,827 |
| 3. | Benefit payments and expenses | (14,949) |
| 4. | Adjustments[2] | (13,439) |
| 5. | Interest credited | 56,456 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,912,749** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 8,019 | 8,623 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 5,651 | 5,069 |
| **Total** | **$13,670** | **$13,692** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $13,670 | $13,670 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 1,063,861 | 1,003,687 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 130,829 | 114,526 |
| ▪ **Total Active Members** | **$1,194,690** | **$1,118,213** |
| Dormant Members | 411,148 | 401,336 |
| Retired Members and Beneficiaries | 162,277 | 161,190 |
| **Total Actuarial Accrued Liability** | **$1,768,115** | **$1,680,739** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $1,768,115 | $1,768,115 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,768,115 | $1,680,739 |
| 2. Actuarial value of assets | 1,912,749 | 1,865,855 |
| 3. Unfunded accrued liability *(1. – 2.)* | (144,634) | (185,116) |
| 4. Funded percentage *(2. ÷ 1.)* | 108% | 111% |
| 5. Combined valuation payroll | $812,514 | $684,037 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (18%) | (27%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($511,175) | ($42,128) | ($39,101) | ($508,148) | ($43,708) |
| December 31, 2009 | $393,051 | $30,025 | $30,166 | $393,192 | $31,151 |
| December 31, 2011 | N/A | N/A | N/A | ($29,678) | ($2,192) |
| **Total** | | | | **($144,634)** | **($14,749)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,680,739 |
| b. Normal cost at December 31, 2010 | 13,692 |
| c. Benefit payments during 2011 | (14,851) |
| d. Interest at 8.0% to December 31, 2011 | 134,960 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,814,540 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,814,540 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,768,115 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 46,425 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,865,855 |
| b. Contributions for 2011[1] | 18,827 |
| c. Benefit payments and expenses during 2011 | (14,949) |
| d. Interest at 8.0% to December 31, 2011 | 149,423 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,019,156 |
| 5. Actuarial value of assets at December 31, 2011 | 1,912,749 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (106,407) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($59,982)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($185,116)** |
| 2. Expected increase | (19,500) |
| 3. Liability (gain)/loss | (46,425) |
| 4. Asset (gain)/loss | 106,407 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($144,634)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 8,019 | 133,408 | 6.01% | 8,623 | 133,485 | 6.46% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 5,651 | 83,260 | 6.79% | 5,069 | 83,339 | 6.08% |
| **Total** | **$13,670** | **$216,668** | **6.31%** | **$13,692** | **$216,824** | **6.31%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($144,634) | ($185,116) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (14,749) | (17,050) |
| 3. Combined valuation payroll | 812,514 | 684,037 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.82%) | (2.49%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.31% | 6.31% |
| b. Tier 1/Tier 2 UAL rate | (1.82%) | (2.49%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 4.62% | 3.94% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 108% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. July 1, 2013 total pension rate, before adjustment | 4.62% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.82%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.82%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 4.62% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.79% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 6.31% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.10% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.10% | 7.71% |
| b. Tier 1/Tier 2 UAL rate | (1.82%) | (2.49%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $133,408 | $0 | $133,408 |
| Tier 2 | 83,260 | 0 | 83,260 |
| Tier 1/Tier 2 valuation payroll | 216,668 | 0 | 216,668 |
| OPSRP valuation payroll | 595,846 | 0 | 595,846 |
| **Combined valuation payroll** | **$812,514** | **$0** | **$812,514** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 1 | 12 | 14 | 1 | 1 | 10 | 12 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 12 | 14 | 1 | 1 | 10 | 12 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 5 | 3 | N/A | 8 | 5 | 5 | N/A | 10 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 5 | 3 | N/A | 8 | 5 | 5 | N/A | 10 |
| **Dormant Members** | | | | | | | | |
| General Service | 5 | 7 | 1 | 13 | 4 | 7 | 1 | 12 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 7 | 1 | 13 | 4 | 7 | 1 | 12 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 1 | 0 | 5 | 4 | 1 | 0 | 5 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 1 | 0 | 5 | 4 | 1 | 0 | 5 |
| **Grand Total Number of Members** | **15** | **12** | **13** | **40** | **14** | **14** | **11** | **39** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | 1 | | | | | | | 1 |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | 1 | | | | 1 |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | 1 | | | 1 | | | | 2 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | |
| 45-49 | 4 | 358 |
| 50-54 | 1 | 1,509 |
| 55-59 | 2 | 255 |
| 60-64 | 2 | 344 |
| 65-69 | 1 | 148 |
| 70-74 | | |
| 75+ | 1 | 419 |
| Total | 12 | 392 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 393 |
| 65-69 | 1 | 289 |
| 70-74 | 3 | 139 |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 5 | 220 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Chiloquin Agency Lake Rural Fire Protection District/2645
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Chiloquin Agency Lake Rural Fire Protection District/2645

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Chiloquin Agency Lake Rural Fire Protection District -- #2645

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Chiloquin Agency Lake Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Chiloquin Agency Lake Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Chiloquin Agency Lake Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.22% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.79% | 4.79% | 4.79% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.16%** | **11.21%** | **13.94%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.75%** | **11.70%** | **14.43%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 84%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.01% | 13.01% |
| Minimum July 1, 2015 Rate | 10.01% | 7.01% |
| Maximum July 1, 2015 Rate | 16.01% | 19.01% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 17 | 24 |
| Amortization factor | 12.145 | 15.251 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.97% | 3.58% | 3.58% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.01% | 4.79% | 4.79% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $218,153 | $311,164 | $93,011 | 70% | $69,256 | 134% |
| 12/31/2007 | 228,927 | 261,506 | 32,579 | 88% | 79,662 | 41% |
| 12/31/2008 | 183,842 | 294,434 | 110,592 | 62% | 89,104 | 124% |
| 12/31/2009 | 225,758 | 274,252 | 48,494 | 82% | 91,355 | 53% |
| 12/31/2010 | 261,306 | 306,711 | 45,405 | 85% | 94,590 | 48% |
| 12/31/2011 | 279,554 | 332,887 | 53,333 | 84% | 94,119 | 57% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Chiloquin Agency Lake Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $53,333 | $45,405 |
| Allocated pooled OPSRP UAL | 1,606 | 1,174 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 54,939 | 46,579 |
| Combined valuation payroll | 94,119 | 94,590 |
| Net pension UAL as a percentage of payroll | 58% | 49% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,438 | $3,403 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $7,733 | $8,819 |
| Tier 1/Tier 2 valuation payroll | 94,119 | 94,590 |
| Tier 1/Tier 2 pension normal cost rate | 8.22% | 9.32% |
| Tier 1/ Tier 2 Actuarial accrued liability | $332,887 | $306,711 |
| Actuarial asset value | 279,554 | 261,306 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 53,333 | 45,405 |
| Tier 1/ Tier 2 Funded status | 84% | 85% |
| Combined valuation payroll | $94,119 | $94,590 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 57% | 48% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 4.79% | 3.97% |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 94,119 | 94,590 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $64,829 | $62,499 |
| 2. Employer reserves | 214,725 | 198,807 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$279,554** | **$261,306** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $261,306 |
| 2. | Regular employer contributions | 11,277 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | (894) |
| 5. | Interest credited | 7,864 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$279,554** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $6,121 | $7,537 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 1,612 | 1,282 |
| **Total** | **$7,733** | **$8,819** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $7,733 | $7,733 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $297,641 | $274,840 |
| ▪ Tier 1 General Service | 7,893 | 7,624 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 6,014 | 4,599 |
| ▪ **Total Active Members** | **$311,548** | **$287,063** |
| Dormant Members | 21,339 | 19,648 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$332,887** | **$306,711** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $332,887 | $332,887 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $332,887 | $306,711 |
| 2. Actuarial value of assets | 279,554 | 261,306 |
| 3. Unfunded accrued liability *(1. – 2.)* | 53,333 | 45,405 |
| 4. Funded percentage *(2. ÷ 1.)* | 84% | 85% |
| 5. Combined valuation payroll | $94,119 | $94,590 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 57% | 48% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $27,232 | $2,244 | $2,083 | $27,071 | $2,328 |
| December 31, 2009 | $21,255 | $1,624 | $1,631 | $21,262 | $1,685 |
| December 31, 2011 | N/A | N/A | N/A | $5,000 | $369 |
| **Total** | | | | **$53,333** | **$4,382** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $306,711 |
| b. Normal cost at December 31, 2010 | 8,819 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 25,242 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 340,772 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 340,772 |
| 2. Actuarial accrued liability at December 31, 2011 | 332,887 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 7,885 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 261,306 |
| b. Contributions for 2011[1] | 11,277 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 21,356 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 293,939 |
| 5. Actuarial value of assets at December 31, 2011 | 279,554 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (14,385) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($6,500)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$45,405** |
| 2. Expected increase | 1,428 |
| 3. Liability (gain)/loss | (7,885) |
| 4. Asset (gain)/loss | 14,385 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$53,333** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $6,121 | $62,765 | 9.75% | $7,537 | $63,360 | 11.90% |
| Tier 1 General Service | 0 | 1,058 | 0.00% | 0 | 1,406 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 1,612 | 30,296 | 5.32% | 1,282 | 29,824 | 4.30% |
| **Total** | **$7,733** | **$94,119** | **8.22%** | **$8,819** | **$94,590** | **9.32%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $53,333 | $45,405 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 4,382 | 3,640 |
| 3. Combined valuation payroll | 94,119 | 94,590 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.66% | 3.85% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.22% | 9.32% |
| b. Tier 1/Tier 2 UAL rate | 4.66% | 3.85% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 13.01% | 13.29% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 13.97% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.97% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.79% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 84% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.97% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.97% |
| 7. July 1, 2013 total pension rate, before adjustment | 13.01% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.66% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.66% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.01% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.22% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.22% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.01% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.22% | 9.32% |
| b. Tier 1/Tier 2 UAL rate | 4.66% | 3.85% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 13.01% | 13.29% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,058 | $62,765 | $63,823 |
| Tier 2 | 30,296 | 0 | 30,296 |
| Tier 1/Tier 2 valuation payroll | 31,354 | 62,765 | 94,119 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$31,354** | **$62,765** | **$94,119** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **3** | **1** | **0** | **4** | **3** | **1** | **0** | **4** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | 1 | | | | | | | **1** |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | 1 | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | | | | **1** | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 134 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 134 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Athena/2167
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Athena/2167

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Athena/2167

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Athena -- #2167

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Athena to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Athena.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Athena*

| | **Payroll** | | |
|---|---|---|---|
| | | **OPSRP** | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 7.45% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (1.52%) | (1.52%) | (1.52%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **6.08%** | **4.90%** | **7.63%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.67%** | **5.39%** | **8.12%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 102%.

| **Funded Status as of December 31, 2013** | **80% to 120%** | **Under 70% or Over 130%** |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.93% | 5.93% |
| Minimum July 1, 2015 Rate | 2.93% | 0.00% |
| Maximum July 1, 2015 Rate | 8.93% | 11.93% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 6 | 10 |
| Amortization factor | 5.355 | 8.042 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (1.52%) | (1.52%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.93% | (1.52%) | (1.52%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,401,886 | $1,129,539 | ($272,347) | 124% | $168,483 | (162%) |
| 12/31/2007 | 1,500,409 | 1,162,854 | (337,555) | 129% | 212,677 | (159%) |
| 12/31/2008 | 1,076,023 | 1,190,413 | 114,390 | 90% | 266,144 | 43% |
| 12/31/2009 | 1,219,634 | 1,196,140 | (23,494) | 102% | 224,568 | (10%) |
| 12/31/2010 | 1,308,772 | 1,215,902 | (92,870) | 108% | 286,337 | (32%) |
| 12/31/2011 | 1,296,055 | 1,269,742 | (26,313) | 102% | 272,640 | (10%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Athena*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($26,313) | ($92,870) |
| Allocated pooled OPSRP UAL | 4,652 | 3,555 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (21,661) | (89,315) |
| Combined valuation payroll | 272,640 | 286,337 |
| Net pension UAL as a percentage of payroll | (8%) | (31%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $7,063 | $10,302 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $11,514 | $10,025 |
| Tier 1/Tier 2 valuation payroll | 154,621 | 145,630 |
| Tier 1/Tier 2 pension normal cost rate | 7.45% | 8.39% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,269,742 | $1,215,902 |
| Actuarial asset value | 1,296,055 | 1,308,772 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (26,313) | (92,870) |
| Tier 1/ Tier 2 Funded status | 102% | 108% |
| Combined valuation payroll | $272,640 | $286,337 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (10%) | (32%) |
| Tier 1/Tier 2 UAL rate | (1.52%) | (3.05%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 4 | 3 |
| Tier 1/Tier 2 dormant members | 3 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 4 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 272,640 | 286,337 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $149,159 | $140,985 |
| 2. Employer reserves | 697,370 | 678,391 |
| 3. Benefits in force reserve | 449,527 | 489,396 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,296,055** | **$1,308,772** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,308,772 |
| 2. Regular employer contributions | 3,981 |
| 3. Benefit payments and expenses | (75,315) |
| 4. Adjustments[2] | 24,712 |
| 5. Interest credited | 33,906 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,296,055** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $3,210 | $2,425 |
| Tier 1 General Service | 3,776 | 3,461 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 4,528 | 4,139 |
| **Total** | **$11,514** | **$10,025** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $11,514 | $11,514 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $170,981 | $158,743 |
| ▪ Tier 1 General Service | 53,351 | 47,727 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 86,706 | 72,327 |
| ▪ **Total Active Members** | **$311,038** | **$278,797** |
| Dormant Members | 141,134 | 131,289 |
| Retired Members and Beneficiaries | 817,570 | 805,816 |
| **Total Actuarial Accrued Liability** | **$1,269,742** | **$1,215,902** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,269,742 | $1,269,742 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,269,742 | $1,215,902 |
| 2. Actuarial value of assets | 1,296,055 | 1,308,772 |
| 3. Unfunded accrued liability *(1. – 2.)* | (26,313) | (92,870) |
| 4. Funded percentage *(2. ÷ 1.)* | 102% | 108% |
| 5. Combined valuation payroll | $272,640 | $286,337 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (10%) | (32%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($361,354) | ($29,779) | ($27,641) | ($359,216) | ($30,896) |
| December 31, 2009 | $339,820 | $25,958 | $26,081 | $339,943 | $26,931 |
| December 31, 2011 | N/A | N/A | N/A | ($7,040) | ($520) |
| **Total** | | | | **($26,313)** | **($4,485)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,215,902 |
| b. Normal cost at December 31, 2010 | 10,025 |
| c. Benefit payments during 2011 | (74,821) |
| d. Interest at 8.0% to December 31, 2011 | 95,081 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,246,187 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,246,187 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,269,742 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (23,555) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,308,772 |
| b. Contributions for 2011[1] | 3,981 |
| c. Benefit payments and expenses during 2011 | (75,315) |
| d. Interest at 8.0% to December 31, 2011 | 101,848 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,339,285 |
| 5. Actuarial value of assets at December 31, 2011 | 1,296,055 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (43,230) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($66,785)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($92,870)** |
| 2. Expected increase | (228) |
| 3. Liability (gain)/loss | 23,555 |
| 4. Asset (gain)/loss | 43,230 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **($26,313)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $3,210 | $57,793 | 5.55% | $2,425 | $57,085 | 4.25% |
| Tier 1 General Service | 3,776 | 30,945 | 12.20% | 3,461 | 29,578 | 11.70% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 4,528 | 65,883 | 6.87% | 4,139 | 58,967 | 7.02% |
| **Total** | **$11,514** | **$154,621** | **7.45%** | **$10,025** | **$145,630** | **6.88%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($26,313) | ($92,870) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (4,485) | (9,089) |
| 3. Combined valuation payroll | 272,640 | 286,337 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.65%) | (3.17%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.45% | 6.88% |
| b. Tier 1/Tier 2 UAL rate | (1.65%) | (3.17%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 5.93% | 3.83% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 102% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | 5.93% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.65%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.65%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 5.93% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.45% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.45% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.93% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.45% | 8.39% |
| b. Tier 1/Tier 2 UAL rate | (1.65%) | (3.17%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 5.93% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $30,945 | $57,793 | $88,738 |
| Tier 2 | 65,883 | 0 | 65,883 |
| Tier 1/Tier 2 valuation payroll | 96,828 | 57,793 | 154,621 |
| OPSRP valuation payroll | 73,715 | 44,304 | 118,019 |
| **Combined valuation payroll** | **$170,543** | **$102,097** | **$272,640** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 2 | 3 | 6 | 1 | 1 | 3 | 5 |
| Police & Fire | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 |
| Total | 2 | 2 | 4 | 8 | 2 | 1 | 4 | 7 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Police & Fire | 2 | 0 | N/A | 2 | 2 | 1 | N/A | 3 |
| Total | 2 | 1 | N/A | 3 | 2 | 2 | N/A | 4 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 2 | 0 | 3 | 1 | 2 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 2 | 0 | 3 | 1 | 2 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Police & Fire | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Total | 3 | 1 | 0 | 4 | 3 | 1 | 0 | 4 |
| **Grand Total Number of Members** | **8** | **6** | **4** | **18** | **8** | **6** | **4** | **18** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 1 | | | | | | | **1** |
| **40-44** | | | | | | | | | | |
| **45-49** | | 1 | 1 | | | | | | | **2** |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **2** | **1** | | | | | | **4** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | 1,899 |
| **45-49** | | |
| **50-54** | 1 | 374 |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | 1 | 67 |
| **75+** | | |
| **Total** | 3 | 780 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 5 |
| **60-64** | 1 | 3,299 |
| **65-69** | 1 | 1,341 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | 1 | 355 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 4 | 1,250 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Beaverton/2106
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Beaverton/2106

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Beaverton/2106

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Beaverton -- #2106

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Beaverton to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Beaverton.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Beaverton*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.89% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.73% | 2.73% | 2.73% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.77%** | **9.15%** | **11.88%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.36%** | **9.64%** | **12.37%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 81%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.62% | 13.62% |
| Minimum July 1, 2015 Rate | 10.62% | 7.62% |
| Maximum July 1, 2015 Rate | 16.62% | 19.62% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.59% | 4.51% | 4.51% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.10% | 6.21% | 6.21% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $152,481,527 | $142,451,626 | ($10,029,901) | 107% | $25,678,994 | (39%) |
| 12/31/2007 | 163,532,200 | 150,054,556 | (13,477,644) | 109% | 26,663,695 | (51%) |
| 12/31/2008 | 124,870,860 | 156,712,907 | 31,842,047 | 80% | 28,710,908 | 111% |
| 12/31/2009 | 141,726,062 | 165,397,635 | 23,671,573 | 86% | 31,185,880 | 76% |
| 12/31/2010 | 152,182,765 | 174,931,684 | 22,748,919 | 87% | 32,532,597 | 70% |
| 12/31/2011 | 146,862,259 | 181,185,933 | 34,323,674 | 81% | 32,648,286 | 105% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Beaverton*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $34,323,674 | $22,748,919 |
| Allocated pooled OPSRP UAL | 557,057 | 403,933 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 34,880,731 | 23,152,852 |
| Combined valuation payroll | 32,648,286 | 32,532,597 |
| Net pension UAL as a percentage of payroll | 107% | 71% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $845,770 | $1,170,471 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $2,314,011 | $2,241,728 |
| Tier 1/Tier 2 valuation payroll | 21,256,215 | 22,009,147 |
| Tier 1/Tier 2 pension normal cost rate | 10.89% | 10.19% |
| Tier 1/ Tier 2 Actuarial accrued liability | $181,185,933 | $174,931,684 |
| Actuarial asset value | 146,862,259 | 152,182,765 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 34,323,674 | 22,748,919 |
| Tier 1/ Tier 2 Funded status | 81% | 87% |
| Combined valuation payroll | $32,648,286 | $32,532,597 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 105% | 70% |
| Tier 1/Tier 2 UAL rate | 2.73% | 3.43% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 298 | 324 |
| Tier 1/Tier 2 dormant members | 150 | 137 |
| Tier 1/Tier 2 retirees and beneficiaries | 334 | 299 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 32,648,286 | 32,532,597 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $27,026,021 | $30,776,081 |
| 2. Employer reserves | 66,687,382 | 69,555,136 |
| 3. Benefits in force reserve | 53,148,856 | 51,851,548 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$146,862,259** | **$152,182,765** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $152,182,765 |
| 2. | Regular employer contributions | 1,953,564 |
| 3. | Benefit payments and expenses | (8,904,724) |
| 4. | Adjustments[2] | (2,903,083) |
| 5. | Interest credited | 4,533,737 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$146,862,259** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $529,707 | $575,420 |
| Tier 1 General Service | 363,255 | 301,032 |
| Tier 2 Police & Fire | 573,611 | 520,857 |
| Tier 2 General Service | 847,438 | 844,419 |
| **Total** | **$2,314,011** | **$2,241,728** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $2,314,011 | $2,314,011 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $16,395,605 | $18,872,529 |
| ▪ Tier 1 General Service | 37,362,024 | 42,161,731 |
| ▪ Tier 2 Police & Fire | 6,092,736 | 5,120,512 |
| ▪ Tier 2 General Service | 10,995,197 | 10,113,129 |
| ▪ **Total Active Members** | **$70,845,562** | **$76,267,901** |
| Dormant Members | 13,676,626 | 13,287,495 |
| Retired Members and Beneficiaries | 96,663,745 | 85,376,288 |
| **Total Actuarial Accrued Liability** | **$181,185,933** | **$174,931,684** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $181,185,933 | $181,185,933 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $181,185,933 | $174,931,684 |
| 2. Actuarial value of assets | 146,862,259 | 152,182,765 |
| 3. Unfunded accrued liability *(1. – 2.)* | 34,323,674 | 22,748,919 |
| 4. Funded percentage *(2. ÷ 1.)* | 81% | 87% |
| 5. Combined valuation payroll | $32,648,286 | $32,532,597 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 105% | 70% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($16,775,604) | ($1,382,491) | ($1,283,198) | ($16,676,311) | ($1,434,334) |
| December 31, 2009 | $40,612,614 | $3,102,377 | $3,116,946 | $40,627,183 | $3,218,716 |
| December 31, 2011 | N/A | N/A | N/A | $10,372,802 | $766,029 |
| **Total** | | | | **$34,323,674** | **$2,550,411** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $174,931,684 |
| b. Normal cost at December 31, 2010 | 2,241,728 |
| c. Benefit payments during 2011 | (8,846,357) |
| d. Interest at 8.0% to December 31, 2011 | 13,820,019 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 182,147,074 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 182,147,074 |
| 2. Actuarial accrued liability at December 31, 2011 | 181,185,933 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 961,141 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 152,182,765 |
| b. Contributions for 2011[1] | 1,953,564 |
| c. Benefit payments and expenses during 2011 | (8,904,724) |
| d. Interest at 8.0% to December 31, 2011 | 11,896,575 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 157,128,180 |
| 5. Actuarial value of assets at December 31, 2011 | 146,862,259 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (10,265,920) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($9,304,779)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$22,748,919** |
| 2. Expected increase | 2,269,976 |
| 3. Liability (gain)/loss | (961,141) |
| 4. Asset (gain)/loss | 10,265,920 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$34,323,674** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $529,707 | $3,144,565 | 16.85% | $575,420 | $3,474,841 | 16.56% |
| Tier 1 General Service | 363,255 | 6,426,167 | 5.65% | 301,032 | 6,858,258 | 4.39% |
| Tier 2 Police & Fire | 573,611 | 3,963,395 | 14.47% | 520,857 | 3,744,908 | 13.91% |
| Tier 2 General Service | 847,438 | 7,722,088 | 10.97% | 844,419 | 7,931,140 | 10.65% |
| **Total** | **$2,314,011** | **$21,256,215** | **10.89%** | **$2,241,728** | **$22,009,147** | **10.19%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $34,323,674 | $22,748,919 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 2,550,411 | 1,639,531 |
| 3. Combined valuation payroll | 32,648,286 | 32,532,597 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 7.81% | 5.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.89% | 10.19% |
| b. Tier 1/Tier 2 UAL rate | 7.81% | 5.04% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 18.83% | 15.35% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.62% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.62% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.12% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 81% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.62% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.62% |
| 7. July 1, 2013 total pension rate, before adjustment | 18.83% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (5.21%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 7.81% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.60% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.62% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.89% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.89% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.62% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.89% | 10.19% |
| b. Tier 1/Tier 2 UAL rate | 2.60% | 3.31% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 13.62% | 13.62% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $6,426,167 | $3,144,565 | $9,570,732 |
| Tier 2 | 7,722,088 | 3,963,395 | 11,685,483 |
| Tier 1/Tier 2 valuation payroll | 14,148,255 | 7,107,960 | 21,256,215 |
| OPSRP valuation payroll | 7,232,759 | 4,159,312 | 11,392,071 |
| **Combined valuation payroll** | **$21,381,014** | **$11,267,272** | **$32,648,286** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 95 | 127 | 141 | 363 | 110 | 135 | 143 | 388 |
| Police & Fire | 32 | 44 | 58 | 134 | 36 | 43 | 53 | 132 |
| Total | 127 | 171 | 199 | 497 | 146 | 178 | 196 | 520 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 80 | 50 | N/A | 130 | 91 | 64 | N/A | 155 |
| Police & Fire | 14 | 7 | N/A | 21 | 20 | 9 | N/A | 29 |
| Total | 94 | 57 | N/A | 151 | 111 | 73 | N/A | 184 |
| **Dormant Members** | | | | | | | | |
| General Service | 72 | 57 | 9 | 138 | 77 | 43 | 4 | 124 |
| Police & Fire | 14 | 7 | 2 | 23 | 11 | 6 | 1 | 18 |
| Total | 86 | 64 | 11 | 161 | 88 | 49 | 5 | 142 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 208 | 21 | 0 | 229 | 191 | 11 | 0 | 202 |
| Police & Fire | 101 | 4 | 0 | 105 | 97 | 0 | 0 | 97 |
| Total | 309 | 25 | 0 | 334 | 288 | 11 | 0 | 299 |
| **Grand Total Number of Members** | **616** | **317** | **210** | **1,143** | **633** | **311** | **201** | **1,145** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | 2 | | | | | | | | **2** |
| **30-34** | 1 | 7 | 6 | | | | | | | **14** |
| **35-39** | | 9 | 24 | 3 | | | | | | **36** |
| **40-44** | | 12 | 17 | 17 | 5 | | | | | **51** |
| **45-49** | | 5 | 15 | 12 | 12 | 3 | 1 | | | **48** |
| **50-54** | | 7 | 20 | 8 | 10 | 8 | 1 | | | **54** |
| **55-59** | 1 | 4 | 11 | 11 | 8 | 3 | 5 | | | **43** |
| **60-64** | | 7 | 11 | 12 | 6 | 2 | 3 | | | **41** |
| **65-69** | | 2 | 4 | 1 | 1 | | | | | **8** |
| **70-74** | | | | | 1 | | | | | **1** |
| **75+** | | | | | | | | | | |
| **Total** | **2** | **55** | **108** | **64** | **43** | **16** | **10** | | | **298** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 2 | 84 |
| **35-39** | 13 | 823 |
| **40-44** | 18 | 892 |
| **45-49** | 25 | 1,310 |
| **50-54** | 29 | 905 |
| **55-59** | 33 | 1,166 |
| **60-64** | 24 | 1,673 |
| **65-69** | 4 | 948 |
| **70-74** | 1 | 605 |
| **75+** | 1 | 5 |
| **Total** | 150 | 1,126 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 2 | 2,551 |
| **45-49** | 2 | 3,494 |
| **50-54** | 13 | 2,200 |
| **55-59** | 52 | 3,025 |
| **60-64** | 69 | 2,097 |
| **65-69** | 85 | 1,737 |
| **70-74** | 58 | 1,525 |
| **75-79** | 24 | 1,479 |
| **80-84** | 19 | 815 |
| **85-89** | 7 | 872 |
| **90-94** | 3 | 578 |
| **95-99** | | |
| **100+** | | |
| **Total** | 334 | 1,909 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Bend/2107
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Bend/2107

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Bend/2107

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

City of Bend -- #2107

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Bend to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Bend.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Bend*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.10% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 6.91% | 6.91% | 6.91% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | (3.03%) | (3.03%) | (3.03%) |
| **Net pension contribution rate** | **16.13%** | **10.30%** | **13.03%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **16.72%** | **10.79%** | **13.52%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 19.01% | 19.01% |
| Minimum July 1, 2015 Rate | 15.21% | 11.41% |
| Maximum July 1, 2015 Rate | 22.81% | 26.61% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 21 | 30 |
| Amortization factor | 13.828 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.29% | 1.91% | 1.91% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.98% | 3.88% | 3.88% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $116,975,172 | $105,993,155 | ($10,982,017) | 110% | $28,228,013 | (39%) |
| 12/31/2007 | 123,895,049 | 110,585,933 | (13,309,116) | 112% | 31,627,544 | (42%) |
| 12/31/2008 | 93,975,721 | 113,200,430 | 19,224,709 | 83% | 30,478,644 | 63% |
| 12/31/2009 | 107,912,057 | 121,599,417 | 13,687,359 | 89% | 30,492,774 | 45% |
| 12/31/2010 | 116,318,438 | 128,704,772 | 12,386,334 | 90% | 31,485,779 | 39% |
| 12/31/2011 | 113,904,241 | 132,422,315 | 18,518,073 | 86% | 31,464,101 | 59% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Bend*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $29,588,331 | $24,184,849 |
| Allocated pooled OPSRP UAL | 536,852 | 390,935 |
| Side account | 11,070,258 | 11,798,515 |
| Net unfunded pension actuarial accrued liability | 19,054,925 | 12,777,269 |
| Combined valuation payroll | 31,464,101 | 31,485,779 |
| Net pension UAL as a percentage of payroll | 61% | 41% |
| Calculated side account rate relief | (3.03%) | (3.09%) |
| Allocated pooled RHIA UAL | $815,093 | $1,132,809 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $2,566,109 | $2,477,562 |
| Tier 1/Tier 2 valuation payroll | 21,207,504 | 22,049,277 |
| Tier 1/Tier 2 pension normal cost rate | 12.10% | 11.24% |
| Tier 1/ Tier 2 Actuarial accrued liability | $132,422,315 | $128,704,772 |
| Actuarial asset value | 102,833,984 | 104,519,923 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 29,588,331 | 24,184,849 |
| Tier 1/ Tier 2 Funded status | 78% | 81% |
| Combined valuation payroll | $31,464,101 | $31,485,779 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 94% | 77% |
| Tier 1/Tier 2 UAL rate | 6.91% | 6.02% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 265 | 283 |
| Tier 1/Tier 2 dormant members | 84 | 85 |
| Tier 1/Tier 2 retirees and beneficiaries | 211 | 194 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | **$11,798,515** | **$11,798,515** |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | (1,000) | (1,000) |
| 4. Amount transferred to employer reserves during 2011 | | (1,040,504) | (1,040,504) |
| 5. Side account earnings during 2011 | | 313,246 | 313,246 |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | **$11,070,258** | **$11,070,258** |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $11,070,258 | $11,798,515 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$11,070,258** | **$11,798,515** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $11,070,258 | $11,798,515 |
| 2. Combined valuation payroll | 31,464,101 | 31,485,779 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | (3.03%) | (3.09%) |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $15,703,577 | $18,365,201 |
| 2. Employer reserves | 49,425,682 | 49,942,317 |
| 3. Benefits in force reserve | 37,704,725 | 36,212,405 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$102,833,984** | **$104,519,923** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $104,519,923 |
| 2. | Regular employer contributions | 2,129,043 |
| 3. | Benefit payments and expenses | (6,317,167) |
| 4. | Adjustments[2] | (1,268,193) |
| 5. | Interest credited | 2,729,873 |
| 6. | Total transferred from side accounts | 1,040,504 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$102,833,984** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $974,786 | $946,339 |
| Tier 1 General Service | 261,693 | 261,396 |
| Tier 2 Police & Fire | 748,125 | 709,799 |
| Tier 2 General Service | 581,505 | 560,028 |
| **Total** | **$2,566,109** | **$2,477,562** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $2,566,109 | $2,566,109 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $27,257,347 | $26,485,596 |
| ▪ Tier 1 General Service | 12,257,880 | 15,885,852 |
| ▪ Tier 2 Police & Fire | 7,237,837 | 6,231,915 |
| ▪ Tier 2 General Service | 6,746,595 | 6,141,867 |
| ▪ **Total Active Members** | **$53,499,659** | **$54,745,230** |
| Dormant Members | 10,347,709 | 14,333,922 |
| Retired Members and Beneficiaries | 68,574,947 | 59,625,620 |
| **Total Actuarial Accrued Liability** | **$132,422,315** | **$128,704,772** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $132,422,315 | $132,422,315 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $132,422,315 | $128,704,772 |
| 2. Actuarial value of assets | 102,833,984 | 104,519,923 |
| 3. Unfunded accrued liability *(1. – 2.)* | 29,588,331 | 24,184,849 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 81% |
| 5. Combined valuation payroll | $31,464,101 | $31,485,779 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 94% | 77% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $1,162,499 | $95,803 | $88,922 | $1,155,618 | $99,396 |
| December 31, 2009 | $24,117,929 | $1,842,356 | $1,851,008 | $24,126,581 | $1,911,444 |
| December 31, 2011 | N/A | N/A | N/A | $4,306,132 | $318,007 |
| **Total** | | | | **$29,588,331** | **$2,328,847** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $128,704,772 |
| b. Normal cost at December 31, 2010 | 2,477,562 |
| c. Benefit payments during 2011 | (6,275,760) |
| d. Interest at 8.0% to December 31, 2011 | 10,243,556 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 135,150,130 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 135,150,130 |
| 2. Actuarial accrued liability at December 31, 2011 | 132,422,315 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 2,727,815 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 104,519,923 |
| b. Contributions for 2011[1] | 3,169,547 |
| c. Benefit payments and expenses during 2011 | (6,317,167) |
| d. Interest at 8.0% to December 31, 2011 | 8,235,689 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 109,607,993 |
| 5. Actuarial value of assets at December 31, 2011 | 102,833,984 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (6,774,009) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($4,046,194)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$24,184,849** |
| 2. Expected increase | 1,357,288 |
| 3. Liability (gain)/loss | (2,727,815) |
| 4. Asset (gain)/loss | 6,774,009 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$29,588,331** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $974,786 | $5,982,601 | 16.29% | $946,339 | $6,200,505 | 15.26% |
| Tier 1 General Service | 261,693 | 3,951,582 | 6.62% | 261,396 | 4,730,671 | 5.53% |
| Tier 2 Police & Fire | 748,125 | 5,372,610 | 13.92% | 709,799 | 5,275,634 | 13.45% |
| Tier 2 General Service | 581,505 | 5,900,711 | 9.85% | 560,028 | 5,842,467 | 9.59% |
| **Total** | **$2,566,109** | **$21,207,504** | **12.10%** | **$2,477,562** | **$22,049,277** | **11.24%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $29,588,331 | $24,184,849 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 2,328,847 | 1,857,251 |
| 3. Combined valuation payroll | 31,464,101 | 31,485,779 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 7.40% | 5.90% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.10% | 11.24% |
| b. Tier 1/Tier 2 UAL rate | 7.40% | 5.90% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 19.63% | 17.26% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 12.34% |
| 2. Employer contribution rate attributable to side accounts | (2.99%) |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.33% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.07% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.07% |
| c. Funded percentage | 78% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.68% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.65% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.01% |
| 7. July 1, 2013 total pension rate, before adjustment | 19.63% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.62%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 7.40% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 6.78% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 19.01% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.10% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.10% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 19.01% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.10% | 11.24% |
| b. Tier 1/Tier 2 UAL rate | 6.78% | 5.90% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 19.01% | 17.26% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $3,951,582 | $5,982,601 | $9,934,183 |
| Tier 2 | 5,900,711 | 5,372,610 | 11,273,321 |
| Tier 1/Tier 2 valuation payroll | 9,852,293 | 11,355,211 | 21,207,504 |
| OPSRP valuation payroll | 7,133,228 | 3,123,369 | 10,256,597 |
| **Combined valuation payroll** | **$16,985,521** | **$14,478,580** | **$31,464,101** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 56 | 91 | 121 | 268 | 67 | 95 | 116 | 278 |
| Police & Fire | 59 | 59 | 40 | 158 | 62 | 59 | 36 | 157 |
| Total | 115 | 150 | 161 | 426 | 129 | 154 | 152 | 435 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 19 | 19 | N/A | 38 | 22 | 23 | N/A | 45 |
| Police & Fire | 10 | 4 | N/A | 14 | 9 | 8 | N/A | 17 |
| Total | 29 | 23 | N/A | 52 | 31 | 31 | N/A | 62 |
| **Dormant Members** | | | | | | | | |
| General Service | 37 | 32 | 8 | 77 | 42 | 29 | 7 | 78 |
| Police & Fire | 11 | 4 | 1 | 16 | 12 | 2 | 2 | 16 |
| Total | 48 | 36 | 9 | 93 | 54 | 31 | 9 | 94 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 107 | 13 | 1 | 121 | 102 | 5 | 1 | 108 |
| Police & Fire | 91 | 0 | 0 | 91 | 87 | 0 | 0 | 87 |
| Total | 198 | 13 | 1 | 212 | 189 | 5 | 1 | 195 |
| **Grand Total Number of Members** | **390** | **222** | **171** | **783** | **403** | **221** | **162** | **786** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | 1 | 9 | 10 | | | | | | | **20** |
| **35-39** | | 16 | 33 | 3 | | | | | | **52** |
| **40-44** | | 11 | 18 | 15 | 3 | | | | | **47** |
| **45-49** | | 4 | 13 | 12 | 10 | 1 | | | | **40** |
| **50-54** | | 6 | 9 | 8 | 11 | 9 | 3 | | | **46** |
| **55-59** | | 7 | 5 | 8 | 10 | 6 | | | | **36** |
| **60-64** | | 2 | 6 | 4 | 5 | | 1 | | 1 | **19** |
| **65-69** | | 1 | 1 | 1 | 1 | 1 | | | | **5** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | **1** | **56** | **95** | **51** | **40** | **17** | **4** | | **1** | **265** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 4 | 874 |
| **35-39** | 6 | 799 |
| **40-44** | 13 | 2,099 |
| **45-49** | 18 | 1,020 |
| **50-54** | 15 | 1,894 |
| **55-59** | 17 | 1,029 |
| **60-64** | 10 | 1,337 |
| **65-69** | | |
| **70-74** | 1 | 442 |
| **75+** | | |
| **Total** | 84 | 1,353 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 5 | 1,512 |
| **45-49** | | |
| **50-54** | 4 | 3,379 |
| **55-59** | 25 | 2,848 |
| **60-64** | 55 | 2,613 |
| **65-69** | 47 | 2,023 |
| **70-74** | 31 | 2,228 |
| **75-79** | 20 | 2,112 |
| **80-84** | 12 | 928 |
| **85-89** | 9 | 955 |
| **90-94** | 3 | 234 |
| **95-99** | | |
| **100+** | | |
| **Total** | 211 | 2,194 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Canyonville/2149
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Canyonville/2149

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA<br>Consulting Actuary | Scott D. Preppernau, FSA, EA<br>Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Canyonville -- #2149

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Canyonville to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Canyonville.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Canyonville*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 10.76% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 3.78% | 3.78% | 3.78% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.69%** | **10.20%** | **12.93%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.28%** | **10.69%** | **13.42%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 73%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.54% | 14.54% |
| Minimum July 1, 2015 Rate | 11.54% | 8.54% |
| Maximum July 1, 2015 Rate | 17.54% | 20.54% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.25% | 5.87% | 5.87% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 19.34% | 8.58% | 8.58% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,549,555 | $1,558,839 | $9,283 | 99% | $274,961 | 3% |
| 12/31/2007 | 1,579,595 | 1,425,168 | (154,427) | 111% | 303,589 | (51%) |
| 12/31/2008 | 1,112,505 | 1,482,576 | 370,071 | 75% | 270,288 | 137% |
| 12/31/2009 | 1,203,798 | 1,536,571 | 332,773 | 78% | 334,911 | 99% |
| 12/31/2010 | 1,263,089 | 1,602,219 | 339,130 | 79% | 340,758 | 100% |
| 12/31/2011 | 1,221,583 | 1,673,061 | 451,478 | 73% | 309,713 | 146% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Canyonville*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $451,478 | $339,130 |
| Allocated pooled OPSRP UAL | 5,284 | 4,231 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 456,762 | 343,361 |
| Combined valuation payroll | 309,713 | 340,758 |
| Net pension UAL as a percentage of payroll | 147% | 101% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $8,023 | $12,260 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $19,259 | $18,890 |
| Tier 1/Tier 2 valuation payroll | 179,001 | 179,328 |
| Tier 1/Tier 2 pension normal cost rate | 10.76% | 10.53% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,673,061 | $1,602,219 |
| Actuarial asset value | 1,221,583 | 1,263,089 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 451,478 | 339,130 |
| Tier 1/ Tier 2 Funded status | 73% | 79% |
| Combined valuation payroll | $309,713 | $340,758 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 146% | 100% |
| Tier 1/Tier 2 UAL rate | 3.78% | 2.21% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 4 | 4 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 20 | 20 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 309,713 | 340,758 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $106,879 | $102,660 |
| 2. Employer reserves | 556,356 | 538,825 |
| 3. Benefits in force reserve | 558,348 | 621,603 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,221,583** | **$1,263,089** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,263,089 |
| 2. Regular employer contributions | 8,202 |
| 3. Benefit payments and expenses | (93,547) |
| 4. Adjustments [2] | 16,418 |
| 5. Interest credited | 27,421 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,221,583** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 2,321 | 1,777 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 16,938 | 17,113 |
| **Total** | **$19,259** | **$18,890** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $19,259 | $19,259 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $11,735 | $11,285 |
| ▪ Tier 1 General Service | 57,963 | 49,183 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 393,002 | 345,580 |
| ▪ **Total Active Members** | **$462,700** | **$406,048** |
| Dormant Members | 194,872 | 172,668 |
| Retired Members and Beneficiaries | 1,015,489 | 1,023,503 |
| **Total Actuarial Accrued Liability** | **$1,673,061** | **$1,602,219** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,673,061 | $1,673,061 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,673,061 | $1,602,219 |
| 2. Actuarial value of assets | 1,221,583 | 1,263,089 |
| 3. Unfunded accrued liability *(1. – 2.)* | 451,478 | 339,130 |
| 4. Funded percentage *(2. ÷ 1.)* | 73% | 79% |
| 5. Combined valuation payroll | $309,713 | $340,758 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 146% | 100% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($152,623) | ($12,577) | ($11,674) | ($151,720) | ($13,049) |
| December 31, 2009 | $487,252 | $37,221 | $37,396 | $487,427 | $38,617 |
| December 31, 2011 | N/A | N/A | N/A | $115,771 | $8,550 |
| **Total** | | | | **$451,478** | **$34,118** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,602,219 |
| b. Normal cost at December 31, 2010 | 18,890 |
| c. Benefit payments during 2011 | (92,934) |
| d. Interest at 8.0% to December 31, 2011 | 125,971 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,654,146 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,654,146 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,673,061 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (18,915) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,263,089 |
| b. Contributions for 2011[1] | 8,202 |
| c. Benefit payments and expenses during 2011 | (93,547) |
| d. Interest at 8.0% to December 31, 2011 | 97,633 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,275,377 |
| 5. Actuarial value of assets at December 31, 2011 | 1,221,583 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (53,794) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($72,709)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$339,130** |
| 2. Expected increase | 39,639 |
| 3. Liability (gain)/loss | 18,915 |
| 4. Asset (gain)/loss | 53,794 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$451,478** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | **December 31, 2011** | | | **December 31, 2010** | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 2,321 | 55,589 | 4.18% | 1,777 | 55,421 | 3.21% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 16,938 | 123,412 | 13.72% | 17,113 | 123,907 | 13.81% |
| **Total** | **$19,259** | **$179,001** | **10.76%** | **$18,890** | **$179,328** | **10.53%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $451,478 | $339,130 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 34,118 | 24,976 |
| 3. Combined valuation payroll | 309,713 | 340,758 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 11.02% | 7.33% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.76% | 10.53% |
| b. Tier 1/Tier 2 UAL rate | 11.02% | 7.33% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 21.91% | 17.98% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 9.44% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.44% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.89% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 73% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 5.10% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.34% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.54% |
| 7. | July 1, 2013 total pension rate, before adjustment | 21.91% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (7.37%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 11.02% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.65% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.54% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.76% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.76% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.54% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.76% | 10.53% |
| b. Tier 1/Tier 2 UAL rate | 3.65% | 2.09% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 14.54% | 12.74% |

# Data

## Demographic Information

### Employer Valuation Payroll

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $55,589 | $0 | $55,589 |
| Tier 2 | 123,412 | 0 | 123,412 |
| Tier 1/Tier 2 valuation payroll | 179,001 | 0 | 179,001 |
| OPSRP valuation payroll | 130,712 | 0 | 130,712 |
| **Combined valuation payroll** | **$309,713** | **$0** | **$309,713** |

### Employer Member Census

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 3 | 4 | 8 | 1 | 3 | 5 | 9 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 3 | 4 | 8 | 1 | 3 | 5 | 9 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 5 | 5 | N/A | 10 | 6 | 5 | N/A | 11 |
| Police & Fire | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Total | 6 | 5 | N/A | 11 | 7 | 5 | N/A | 12 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 11 | 1 | 0 | 12 | 11 | 1 | 0 | 12 |
| Police & Fire | 8 | 0 | 0 | 8 | 8 | 0 | 0 | 8 |
| Total | 19 | 1 | 0 | 20 | 19 | 1 | 0 | 20 |
| **Grand Total Number of Members** | **27** | **10** | **5** | **42** | **28** | **10** | **5** | **43** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | 1 | | | | | | | 1 |
| 55-59 | | | | 1 | | | | | | 1 |
| 60-64 | | | 1 | 1 | | | | | | 2 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | 2 | 2 | | | | | | 4 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 2 | 696 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 2 | 696 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 1 | 90 |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 114 |
| 60-64 | 2 | 158 |
| 65-69 | 3 | 686 |
| 70-74 | 2 | 53 |
| 75-79 | 7 | 390 |
| 80-84 | 3 | 854 |
| 85-89 | 1 | 228 |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 20 | 410 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Chiloquin/2186
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Chiloquin/2186

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Chiloquin/2186

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Chiloquin -- #2186

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Chiloquin to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Chiloquin.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Chiloquin*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.57% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (4.25%) | (4.25%) | (4.25%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **9.47%** | **2.17%** | **4.90%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.06%** | **2.66%** | **5.39%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 129%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 9.32% | 9.32% |
| Minimum July 1, 2015 Rate | 6.32% | 3.32% |
| Maximum July 1, 2015 Rate | 12.32% | 15.32% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 14 | 16 |
| Amortization factor | 10.304 | 11.880 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.69% | (4.81%) | (4.81%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.32% | (4.25%) | (4.25%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $281,626 | $149,958 | ($131,669) | 188% | $71,723 | (184%) |
| 12/31/2007 | 301,289 | 159,889 | (141,400) | 188% | 123,294 | (115%) |
| 12/31/2008 | 217,305 | 164,346 | (52,959) | 132% | 132,882 | (40%) |
| 12/31/2009 | 251,498 | 176,052 | (75,446) | 143% | 128,619 | (59%) |
| 12/31/2010 | 271,863 | 197,519 | (74,344) | 138% | 149,992 | (50%) |
| 12/31/2011 | 269,067 | 209,321 | (59,746) | 129% | 131,874 | (45%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Chiloquin*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($59,746) | ($74,344) |
| Allocated pooled OPSRP UAL | 2,250 | 1,862 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (57,496) | (72,482) |
| Combined valuation payroll | 131,874 | 149,992 |
| Net pension UAL as a percentage of payroll | (44%) | (48%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,416 | $5,396 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5,999 | $5,965 |
| Tier 1/Tier 2 valuation payroll | 44,222 | 46,165 |
| Tier 1/Tier 2 pension normal cost rate | 13.57% | 12.92% |
| Tier 1/ Tier 2 Actuarial accrued liability | $209,321 | $197,519 |
| Actuarial asset value | 269,067 | 271,863 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (59,746) | (74,344) |
| Tier 1/ Tier 2 Funded status | 129% | 138% |
| Combined valuation payroll | $131,874 | $149,992 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (45%) | (50%) |
| Tier 1/Tier 2 UAL rate | (4.25%) | (4.24%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 131,874 | 149,992 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $29,395 | $28,309 |
| 2. Employer reserves | 194,886 | 194,096 |
| 3. Benefits in force reserve | 44,787 | 49,458 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$269,067** | **$271,863** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $271,863 |
| 2. Regular employer contributions | (3,343) |
| 3. Benefit payments and expenses | (7,504) |
| 4. Adjustments [2] | 2,090 |
| 5. Interest credited | 5,961 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$269,067** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 5,999 | 5,965 |
| **Total** | **$5,999** | **$5,965** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $5,999 | $5,999 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 118,922 | 107,699 |
| ▪ **Total Active Members** | **$118,922** | **$107,699** |
| Dormant Members | 8,944 | 8,384 |
| Retired Members and Beneficiaries | 81,455 | 81,436 |
| **Total Actuarial Accrued Liability** | **$209,321** | **$197,519** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $209,321 | $209,321 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $209,321 | $197,519 |
| 2. Actuarial value of assets | 269,067 | 271,863 |
| 3. Unfunded accrued liability *(1. – 2.)* | (59,746) | (74,344) |
| 4. Funded percentage *(2. ÷ 1.)* | 129% | 138% |
| 5. Combined valuation payroll | $131,874 | $149,992 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (45%) | (50%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($143,415) | ($11,819) | ($10,970) | ($142,566) | ($12,262) |
| December 31, 2009 | $68,549 | $5,236 | $5,261 | $68,574 | $5,432 |
| December 31, 2011 | N/A | N/A | N/A | $14,246 | $1,052 |
| **Total** | | | | **($59,746)** | **($5,778)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $197,519 |
| b. Normal cost at December 31, 2010 | 5,965 |
| c. Benefit payments during 2011 | (7,455) |
| d. Interest at 8.0% to December 31, 2011 | 15,981 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 212,010 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 212,010 |
| 2. Actuarial accrued liability at December 31, 2011 | 209,321 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 2,689 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 271,863 |
| b. Contributions for 2011[1] | (3,343) |
| c. Benefit payments and expenses during 2011 | (7,504) |
| d. Interest at 8.0% to December 31, 2011 | 21,315 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 282,332 |
| 5. Actuarial value of assets at December 31, 2011 | 269,067 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (13,265) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($10,576)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($74,344)** |
| 2. Expected increase | 4,022 |
| 3. Liability (gain)/loss | (2,689) |
| 4. Asset (gain)/loss | 13,265 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($59,746)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 5,999 | 44,222 | 13.57% | 5,965 | 46,165 | 12.92% |
| **Total** | **$5,999** | **$44,222** | **13.57%** | **$5,965** | **$46,165** | **12.92%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($59,746) | ($74,344) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (5,778) | (6,544) |
| 3. Combined valuation payroll | 131,874 | 149,992 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (4.38%) | (4.36%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.57% | 12.92% |
| b. Tier 1/Tier 2 UAL rate | (4.38%) | (4.36%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 9.32% | 8.68% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 7.69% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.69% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.54% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 129% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 5.70% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 1.99% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.39% |
| 7. | July 1, 2013 total pension rate, before adjustment | 9.32% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (4.38%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (4.38%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 9.32% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.57% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.57% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 9.32% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.57% | 12.92% |
| b. Tier 1/Tier 2 UAL rate | (4.38%) | (4.36%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 9.32% | 8.68% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 44,222 | 0 | 44,222 |
| Tier 1/Tier 2 valuation payroll | 44,222 | 0 | 44,222 |
| OPSRP valuation payroll | 87,652 | 0 | 87,652 |
| **Combined valuation payroll** | **$131,874** | **$0** | **$131,874** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 3 | 4 | 0 | 1 | 2 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 3 | 4 | 0 | 1 | 2 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **2** | **2** | **4** | **8** | **2** | **2** | **2** | **6** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | 1 | | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 57 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 57 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | 1 | 675 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 1 | 675 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Clatskanie/2162
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Clatskanie/2162

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Clatskanie -- #2162

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Clatskanie to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Clatskanie.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Clatskanie*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.71% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 3.95% | 3.95% | 3.95% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.81%** | **10.37%** | **13.10%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.40%** | **10.86%** | **13.59%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 84%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.66% | 14.66% |
| Minimum July 1, 2015 Rate | 11.66% | 8.66% |
| Maximum July 1, 2015 Rate | 17.66% | 20.66% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.43% | 5.70% | 5.70% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.24% | 7.53% | 7.53% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $6,600,466 | $6,180,724 | ($419,741) | 107% | $881,823 | (48%) |
| 12/31/2007 | 7,108,423 | 6,522,450 | (585,973) | 109% | 863,410 | (68%) |
| 12/31/2008 | 5,738,465 | 7,061,587 | 1,323,122 | 81% | 754,261 | 175% |
| 12/31/2009 | 6,704,003 | 7,633,373 | 929,370 | 88% | 964,009 | 96% |
| 12/31/2010 | 6,665,662 | 7,626,631 | 960,969 | 87% | 987,654 | 97% |
| 12/31/2011 | 6,731,192 | 8,033,650 | 1,302,458 | 84% | 1,019,475 | 128% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Clatskanie*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,302,458 | $960,969 |
| Allocated pooled OPSRP UAL | 17,395 | 12,263 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,319,853 | 973,232 |
| Combined valuation payroll | 1,019,475 | 987,654 |
| Net pension UAL as a percentage of payroll | 129% | 99% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $26,410 | $35,534 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $81,483 | $80,458 |
| Tier 1/Tier 2 valuation payroll | 760,855 | 760,740 |
| Tier 1/Tier 2 pension normal cost rate | 10.71% | 10.58% |
| Tier 1/ Tier 2 Actuarial accrued liability | $8,033,650 | $7,626,631 |
| Actuarial asset value | 6,731,192 | 6,665,662 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,302,458 | 960,969 |
| Tier 1/ Tier 2 Funded status | 84% | 87% |
| Combined valuation payroll | $1,019,475 | $987,654 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 128% | 97% |
| Tier 1/Tier 2 UAL rate | 3.95% | 4.08% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 11 | 11 |
| Tier 1/Tier 2 dormant members | 2 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 18 | 18 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,019,475 | 987,654 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,657,465 | $1,558,376 |
| 2. Employer reserves | 3,131,295 | 2,985,224 |
| 3. Benefits in force reserve | 1,942,431 | 2,122,062 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$6,731,192** | **$6,665,662** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $6,665,662 |
| 2. | Regular employer contributions | 78,138 |
| 3. | Benefit payments and expenses | (325,441) |
| 4. | Adjustments [2] | 82,891 |
| 5. | Interest credited | 229,942 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$6,731,192** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $33,059 | $33,998 |
| Tier 1 General Service | 20,996 | 20,402 |
| Tier 2 Police & Fire | 11,887 | 11,151 |
| Tier 2 General Service | 15,541 | 14,907 |
| **Total** | **$81,483** | **$80,458** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $81,483 | $81,483 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $1,015,526 | $1,013,221 |
| ▪ Tier 1 General Service | 3,101,015 | 2,883,380 |
| ▪ Tier 2 Police & Fire | 168,052 | 145,814 |
| ▪ Tier 2 General Service | 109,562 | 90,130 |
| ▪ **Total Active Members** | **$4,394,155** | **$4,132,545** |
| Dormant Members | 106,725 | 0 |
| Retired Members and Beneficiaries | 3,532,770 | 3,494,086 |
| **Total Actuarial Accrued Liability** | **$8,033,650** | **$7,626,631** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $8,033,650 | $8,033,650 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $8,033,650 | $7,626,631 |
| 2. Actuarial value of assets | 6,731,192 | 6,665,662 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,302,458 | 960,969 |
| 4. Funded percentage *(2. ÷ 1.)* | 84% | 87% |
| 5. Combined valuation payroll | $1,019,475 | $987,654 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 128% | 97% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($802,139) | ($66,105) | ($61,357) | ($797,391) | ($68,584) |
| December 31, 2009 | $1,738,811 | $132,827 | $133,451 | $1,739,435 | $137,808 |
| December 31, 2011 | N/A | N/A | N/A | $360,414 | $26,616 |
| **Total** | | | | **$1,302,458** | **$95,840** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $7,626,631 |
| b. Normal cost at December 31, 2010 | 80,458 |
| c. Benefit payments during 2011 | (323,308) |
| d. Interest at 8.0% to December 31, 2011 | 603,635 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 7,987,416 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 7,987,416 |
| 2. Actuarial accrued liability at December 31, 2011 | 8,033,650 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (46,234) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 6,665,662 |
| b. Contributions for 2011[1] | 78,138 |
| c. Benefit payments and expenses during 2011 | (325,441) |
| d. Interest at 8.0% to December 31, 2011 | 523,361 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 6,941,720 |
| 5. Actuarial value of assets at December 31, 2011 | 6,731,192 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (210,528) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($256,762)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$960,969** |
| 2. Expected increase | 84,727 |
| 3. Liability (gain)/loss | 46,234 |
| 4. Asset (gain)/loss | 210,528 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,302,458** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $33,059 | $169,579 | 19.49% | $33,998 | $178,889 | 19.01% |
| Tier 1 General Service | 20,996 | 381,756 | 5.50% | 20,402 | 377,798 | 5.40% |
| Tier 2 Police & Fire | 11,887 | 79,396 | 14.97% | 11,151 | 76,971 | 14.49% |
| Tier 2 General Service | 15,541 | 130,124 | 11.94% | 14,907 | 127,082 | 11.73% |
| **Total** | **$81,483** | **$760,855** | **10.71%** | **$80,458** | **$760,740** | **10.58%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,302,458 | $960,969 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 95,840 | 68,516 |
| 3. Combined valuation payroll | 1,019,475 | 987,654 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 9.40% | 6.94% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.71% | 10.58% |
| b. Tier 1/Tier 2 UAL rate | 9.40% | 6.94% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 20.24% | 17.64% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 11.66% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 11.66% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.33% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 84% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.66% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.66% |
| 7. July 1, 2013 total pension rate, before adjustment | 20.24% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (5.58%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 9.40% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.82% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.66% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.71% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.71% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.66% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.71% | 10.58% |
| b. Tier 1/Tier 2 UAL rate | 3.82% | 3.96% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 14.66% | 14.66% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $381,756 | $169,579 | $551,335 |
| Tier 2 | 130,124 | 79,396 | 209,520 |
| Tier 1/Tier 2 valuation payroll | 511,880 | 248,975 | 760,855 |
| OPSRP valuation payroll | 153,050 | 105,570 | 258,620 |
| **Combined valuation payroll** | **$664,930** | **$354,545** | **$1,019,475** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 6 | 2 | 3 | 11 | 6 | 2 | 4 | 12 |
| Police & Fire | 2 | 1 | 2 | 5 | 2 | 1 | 1 | 4 |
| Total | 8 | 3 | 5 | 16 | 8 | 3 | 5 | 16 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 6 | 0 | N/A | 6 | 7 | 0 | N/A | 7 |
| Total | 7 | 0 | N/A | 7 | 8 | 0 | N/A | 8 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 12 | 0 | 0 | 12 | 12 | 0 | 0 | 12 |
| Police & Fire | 5 | 1 | 0 | 6 | 5 | 1 | 0 | 6 |
| Total | 17 | 1 | 0 | 18 | 17 | 1 | 0 | 18 |
| **Grand Total Number of Members** | **34** | **4** | **5** | **43** | **33** | **4** | **5** | **42** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | 1 | | 1 | | | | | | **2** |
| **50-54** | | | | | 1 | | | | | **1** |
| **55-59** | | | | 3 | | | | 2 | | **5** |
| **60-64** | | | 1 | | | 1 | | | | **2** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **2** | **4** | **1** | **1** | | **2** | | **11** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | |
| **45-49** | 1 | 1,012 |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 2 | 506 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 1 | 2,666 |
| **45-49** | 1 | 105 |
| **50-54** | 2 | 2,082 |
| **55-59** | | |
| **60-64** | 3 | 1,754 |
| **65-69** | 3 | 2,295 |
| **70-74** | 1 | 113 |
| **75-79** | 2 | 302 |
| **80-84** | 2 | 1,085 |
| **85-89** | 1 | 1,473 |
| **90-94** | 2 | 55 |
| **95-99** | | |
| **100+** | | |
| **Total** | 18 | 1,308 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Coos Bay/2152
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Coos Bay/2152

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Coos Bay/2152

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Coos Bay -- #2152

**Secondary Employers**

2190 City Of Eastside

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Coos Bay to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Coos Bay.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Coos Bay*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.37% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.60% | 2.60% | 2.60% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.12%** | **9.02%** | **11.75%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **16.71%** | **9.51%** | **12.24%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 83%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 15.97% | 15.97% |
| Minimum July 1, 2015 Rate | 12.78% | 9.59% |
| Maximum July 1, 2015 Rate | 19.16% | 22.35% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.40% | 5.33% | 5.33% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 20.24% | 6.87% | 6.87% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $36,494,231 | $33,901,635 | ($2,592,596) | 108% | $4,358,838 | (59%) |
| 12/31/2007 | 38,665,975 | 35,658,154 | (3,007,821) | 108% | 4,801,518 | (63%) |
| 12/31/2008 | 29,981,209 | 37,359,256 | 7,378,047 | 80% | 5,072,888 | 145% |
| 12/31/2009 | 33,985,858 | 38,913,223 | 4,927,365 | 87% | 5,474,299 | 90% |
| 12/31/2010 | 35,757,840 | 40,041,572 | 4,283,732 | 89% | 5,849,235 | 73% |
| 12/31/2011 | 35,279,915 | 42,431,747 | 7,151,832 | 83% | 6,136,958 | 117% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Coos Bay*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $7,151,832 | $4,283,732 |
| Allocated pooled OPSRP UAL | 104,711 | 72,626 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 7,256,543 | 4,356,358 |
| Combined valuation payroll | 6,136,958 | 5,849,235 |
| Net pension UAL as a percentage of payroll | 118% | 74% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $158,981 | $210,446 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $573,005 | $514,300 |
| Tier 1/Tier 2 valuation payroll | 4,284,536 | 4,333,777 |
| Tier 1/Tier 2 pension normal cost rate | 13.37% | 11.87% |
| Tier 1/ Tier 2 Actuarial accrued liability | $42,431,747 | $40,041,572 |
| Actuarial asset value | 35,279,915 | 35,757,840 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 7,151,832 | 4,283,732 |
| Tier 1/ Tier 2 Funded status | 83% | 89% |
| Combined valuation payroll | $6,136,958 | $5,849,235 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 117% | 73% |
| Tier 1/Tier 2 UAL rate | 2.60% | 4.10% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 58 | 63 |
| Tier 1/Tier 2 dormant members | 23 | 22 |
| Tier 1/Tier 2 retirees and beneficiaries | 100 | 93 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 6,136,958 | 5,849,235 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $6,555,950 | $7,191,861 |
| 2. Employer reserves | 17,067,890 | 17,327,842 |
| 3. Benefits in force reserve | 11,656,075 | 11,238,137 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$35,279,915** | **$35,757,840** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $35,757,840 |
| 2. | Regular employer contributions | 506,965 |
| 3. | Benefit payments and expenses | (1,952,895) |
| 4. | Adjustments [2] | (98,940) |
| 5. | Interest credited | 1,066,945 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$35,279,915** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $218,417 | $186,666 |
| Tier 1 General Service | 57,564 | 43,935 |
| Tier 2 Police & Fire | 236,625 | 217,719 |
| Tier 2 General Service | 60,399 | 65,980 |
| **Total** | **$573,005** | **$514,300** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $573,005 | $573,005 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $6,332,044 | $5,884,161 |
| ▪ Tier 1 General Service | 6,783,028 | 8,600,837 |
| ▪ Tier 2 Police & Fire | 2,919,595 | 2,486,553 |
| ▪ Tier 2 General Service | 557,402 | 596,123 |
| ▪ **Total Active Members** | **$16,592,069** | **$17,567,674** |
| Dormant Members | 4,640,353 | 3,969,716 |
| Retired Members and Beneficiaries | 21,199,325 | 18,504,182 |
| **Total Actuarial Accrued Liability** | **$42,431,747** | **$40,041,572** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $42,431,747 | $42,431,747 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $42,431,747 | $40,041,572 |
| 2. Actuarial value of assets | 35,279,915 | 35,757,840 |
| 3. Unfunded accrued liability *(1. – 2.)* | 7,151,832 | 4,283,732 |
| 4. Funded percentage *(2. ÷ 1.)* | 83% | 89% |
| 5. Combined valuation payroll | $6,136,958 | $5,849,235 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 117% | 73% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($3,601,202) | ($296,777) | ($275,463) | ($3,579,888) | ($307,906) |
| December 31, 2009 | $8,563,616 | $654,171 | $657,242 | $8,566,687 | $678,702 |
| December 31, 2011 | N/A | N/A | N/A | $2,165,033 | $159,887 |
| **Total** | | | | **$7,151,832** | **$530,683** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $40,041,572 |
| b. Normal cost at December 31, 2010 | 514,300 |
| c. Benefit payments during 2011 | (1,940,095) |
| d. Interest at 8.0% to December 31, 2011 | 3,166,866 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 41,782,643 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 41,782,643 |
| 2. Actuarial accrued liability at December 31, 2011 | 42,431,747 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (649,104) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 35,757,840 |
| b. Contributions for 2011[1] | 506,965 |
| c. Benefit payments and expenses during 2011 | (1,952,895) |
| d. Interest at 8.0% to December 31, 2011 | 2,802,790 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 37,114,700 |
| 5. Actuarial value of assets at December 31, 2011 | 35,279,915 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,834,785) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($2,483,889)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$4,283,732** |
| 2. Expected increase | 384,211 |
| 3. Liability (gain)/loss | 649,104 |
| 4. Asset (gain)/loss | 1,834,785 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$7,151,832** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $218,417 | $1,131,564 | 19.30% | $186,666 | $1,055,418 | 17.69% |
| Tier 1 General Service | 57,564 | 1,085,568 | 5.30% | 43,935 | 1,232,111 | 3.57% |
| Tier 2 Police & Fire | 236,625 | 1,568,056 | 15.09% | 217,719 | 1,496,430 | 14.55% |
| Tier 2 General Service | 60,399 | 499,348 | 12.10% | 65,980 | 549,818 | 12.00% |
| **Total** | **$573,005** | **$4,284,536** | **13.37%** | **$514,300** | **$4,333,777** | **11.87%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $7,151,832 | $4,283,732 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 530,683 | 307,273 |
| 3. Combined valuation payroll | 6,136,958 | 5,849,235 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.65% | 5.25% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.37% | 11.87% |
| b. Tier 1/Tier 2 UAL rate | 8.65% | 5.25% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 22.15% | 17.24% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 12.97% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 12.97% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.59% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 83% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 9.97% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 15.97% |
| 7. | July 1, 2013 total pension rate, before adjustment | 22.15% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (6.18%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.65% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.47% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 15.97% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.37% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.37% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 15.97% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.37% | 11.87% |
| b. Tier 1/Tier 2 UAL rate | 2.47% | 3.98% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 15.97% | 15.97% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,085,568 | $1,131,564 | $2,217,132 |
| Tier 2 | 499,348 | 1,568,056 | 2,067,404 |
| Tier 1/Tier 2 valuation payroll | 1,584,916 | 2,699,620 | 4,284,536 |
| OPSRP valuation payroll | 898,469 | 953,953 | 1,852,422 |
| **Combined valuation payroll** | **$2,483,385** | **$3,653,573** | **$6,136,958** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 19 | 9 | 18 | 46 | 22 | 11 | 15 | 48 |
| Police & Fire | 12 | 18 | 12 | 42 | 12 | 18 | 12 | 42 |
| Total | 31 | 27 | 30 | 88 | 34 | 29 | 27 | 90 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 24 | 5 | N/A | 29 | 26 | 10 | N/A | 36 |
| Police & Fire | 16 | 2 | N/A | 18 | 18 | 2 | N/A | 20 |
| Total | 40 | 7 | N/A | 47 | 44 | 12 | N/A | 56 |
| **Dormant Members** | | | | | | | | |
| General Service | 9 | 6 | 1 | 16 | 11 | 5 | 1 | 17 |
| Police & Fire | 8 | 0 | 1 | 9 | 5 | 1 | 1 | 7 |
| Total | 17 | 6 | 2 | 25 | 16 | 6 | 2 | 24 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 52 | 7 | 0 | 59 | 48 | 3 | 0 | 51 |
| Police & Fire | 41 | 0 | 0 | 41 | 42 | 0 | 0 | 42 |
| Total | 93 | 7 | 0 | 100 | 90 | 3 | 0 | 93 |
| **Grand Total Number of Members** | **181** | **47** | **32** | **260** | **184** | **50** | **29** | **263** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | 1 | | | | | | | **2** |
| **35-39** | | 1 | 5 | | | | | | | **6** |
| **40-44** | | 3 | 4 | 6 | 1 | | | | | **14** |
| **45-49** | | 2 | 1 | 1 | 5 | 1 | | | | **10** |
| **50-54** | | | 1 | 3 | 3 | 2 | | | | **9** |
| **55-59** | | 2 | 2 | 2 | | 1 | | | | **7** |
| **60-64** | | | 1 | 1 | 2 | 4 | | | | **8** |
| **65-69** | | | 1 | | | 1 | | | | **2** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **9** | **16** | **13** | **11** | **9** | | | | **58** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | 2,389 |
| **45-49** | 8 | 1,834 |
| **50-54** | 3 | 1,962 |
| **55-59** | 4 | 2,073 |
| **60-64** | 6 | 1,482 |
| **65-69** | 1 | 38 |
| **70-74** | | |
| **75+** | | |
| **Total** | 23 | 1,746 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 2 | 449 |
| **45-49** | 1 | 2,282 |
| **50-54** | 1 | 93 |
| **55-59** | 10 | 1,887 |
| **60-64** | 23 | 1,560 |
| **65-69** | 24 | 1,945 |
| **70-74** | 24 | 935 |
| **75-79** | 8 | 1,252 |
| **80-84** | 4 | 1,320 |
| **85-89** | 1 | 248 |
| **90-94** | 1 | 128 |
| **95-99** | 1 | 149 |
| **100+** | | |
| **Total** | 100 | 1,430 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Cornelius/2165
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Cornelius/2165

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Cornelius/2165

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

City of Cornelius -- #2165

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Cornelius to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Cornelius.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Cornelius*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.65% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.00% | 2.00% | 2.00% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.80%** | **8.42%** | **11.15%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.39%** | **8.91%** | **11.64%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 89%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.65% | 11.65% |
| Minimum July 1, 2015 Rate | 8.65% | 5.65% |
| Maximum July 1, 2015 Rate | 14.65% | 17.65% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.93% | 0.40% | 0.40% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.56% | 2.91% | 2.91% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $12,122,941 | $10,532,672 | ($1,590,269) | 115% | $2,941,786 | (54%) |
| 12/31/2007 | 13,318,970 | 11,260,902 | (2,058,068) | 118% | 3,059,681 | (67%) |
| 12/31/2008 | 10,417,104 | 11,776,605 | 1,359,501 | 88% | 3,108,035 | 44% |
| 12/31/2009 | 12,174,164 | 12,344,876 | 170,712 | 99% | 3,230,582 | 5% |
| 12/31/2010 | 12,910,986 | 13,544,596 | 633,610 | 95% | 3,185,343 | 20% |
| 12/31/2011 | 12,741,384 | 14,273,829 | 1,532,445 | 89% | 3,159,772 | 49% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Cornelius*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,532,445 | $633,610 |
| Allocated pooled OPSRP UAL | 53,913 | 39,550 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,586,358 | 673,160 |
| Combined valuation payroll | 3,159,772 | 3,185,343 |
| Net pension UAL as a percentage of payroll | 50% | 21% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $81,855 | $114,604 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $202,409 | $194,611 |
| Tier 1/Tier 2 valuation payroll | 2,097,728 | 2,146,826 |
| Tier 1/Tier 2 pension normal cost rate | 9.65% | 9.07% |
| Tier 1/ Tier 2 Actuarial accrued liability | $14,273,829 | $13,544,596 |
| Actuarial asset value | 12,741,384 | 12,910,986 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,532,445 | 633,610 |
| Tier 1/ Tier 2 Funded status | 89% | 95% |
| Combined valuation payroll | $3,159,772 | $3,185,343 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 49% | 20% |
| Tier 1/Tier 2 UAL rate | 2.00% | 1.16% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 29 | 31 |
| Tier 1/Tier 2 dormant members | 16 | 13 |
| Tier 1/Tier 2 retirees and beneficiaries | 31 | 28 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 3,159,772 | 3,185,343 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $2,378,151 | $2,482,330 |
| 2. Employer reserves | 6,612,024 | 6,961,105 |
| 3. Benefits in force reserve | 3,751,209 | 3,467,551 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$12,741,384** | **$12,910,986** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $12,910,986 |
| 2. Regular employer contributions | 166,786 |
| 3. Benefit payments and expenses | (628,489) |
| 4. Adjustments[2] | (83,853) |
| 5. Interest credited | 375,955 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$12,741,384** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $51,360 | $45,577 |
| Tier 1 General Service | 29,640 | 25,880 |
| Tier 2 Police & Fire | 44,329 | 38,889 |
| Tier 2 General Service | 77,080 | 84,265 |
| **Total** | **$202,409** | **$194,611** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $202,409 | $202,409 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $2,100,350 | $2,027,266 |
| ▪ Tier 1 General Service | 2,516,596 | 2,340,690 |
| ▪ Tier 2 Police & Fire | 563,645 | 479,652 |
| ▪ Tier 2 General Service | 1,321,594 | 1,339,515 |
| ▪ **Total Active Members** | **$6,502,185** | **$6,187,123** |
| Dormant Members | 949,183 | 1,647,969 |
| Retired Members and Beneficiaries | 6,822,461 | 5,709,504 |
| **Total Actuarial Accrued Liability** | **$14,273,829** | **$13,544,596** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $14,273,829 | $14,273,829 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $14,273,829 | $13,544,596 |
| 2. Actuarial value of assets | 12,741,384 | 12,910,986 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,532,445 | 633,610 |
| 4. Funded percentage *(2. ÷ 1.)* | 89% | 95% |
| 5. Combined valuation payroll | $3,159,772 | $3,185,343 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 49% | 20% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($2,351,348) | ($193,777) | ($179,859) | ($2,337,430) | ($201,044) |
| December 31, 2009 | $2,535,787 | $193,707 | $194,617 | $2,536,697 | $200,971 |
| December 31, 2011 | N/A | N/A | N/A | $1,333,178 | $98,455 |
| **Total** | | | | **$1,532,445** | **$98,382** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $13,544,596 |
| b. Normal cost at December 31, 2010 | 194,611 |
| c. Benefit payments during 2011 | (624,370) |
| d. Interest at 8.0% to December 31, 2011 | 1,074,162 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 14,188,999 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 14,188,999 |
| 2. Actuarial accrued liability at December 31, 2011 | 14,273,829 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (84,830) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 12,910,986 |
| b. Contributions for 2011[1] | 166,786 |
| c. Benefit payments and expenses during 2011 | (628,489) |
| d. Interest at 8.0% to December 31, 2011 | 1,014,411 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 13,463,693 |
| 5. Actuarial value of assets at December 31, 2011 | 12,741,384 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (722,308) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($807,138)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$633,610** |
| 2. Expected increase | 91,697 |
| 3. Liability (gain)/loss | 84,830 |
| 4. Asset (gain)/loss | 722,308 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,532,445** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $51,360 | $408,907 | 12.56% | $45,577 | $400,125 | 11.39% |
| Tier 1 General Service | 29,640 | 538,988 | 5.50% | 25,880 | 527,010 | 4.91% |
| Tier 2 Police & Fire | 44,329 | 329,174 | 13.47% | 38,889 | 306,213 | 12.70% |
| Tier 2 General Service | 77,080 | 820,659 | 9.39% | 84,265 | 913,478 | 9.22% |
| **Total** | **$202,409** | **$2,097,728** | **9.65%** | **$194,611** | **$2,146,826** | **9.07%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,532,445 | $633,610 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 98,382 | 33,101 |
| 3. Combined valuation payroll | 3,159,772 | 3,185,343 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.11% | 1.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.65% | 9.07% |
| b. Tier 1/Tier 2 UAL rate | 3.11% | 1.04% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 12.89% | 10.23% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 8.65% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.65% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.73% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 89% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.65% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.65% |
| 7. | July 1, 2013 total pension rate, before adjustment | 12.89% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.24%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.11% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.87% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.65% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.65% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.65% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.65% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.65% | 9.07% |
| b. Tier 1/Tier 2 UAL rate | 1.87% | 1.04% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 11.65% | 10.23% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $538,988 | $408,907 | $947,895 |
| Tier 2 | 820,659 | 329,174 | 1,149,833 |
| Tier 1/Tier 2 valuation payroll | 1,359,647 | 738,081 | 2,097,728 |
| OPSRP valuation payroll | 504,564 | 557,480 | 1,062,044 |
| **Combined valuation payroll** | **$1,864,211** | **$1,295,561** | **$3,159,772** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 8 | 13 | 12 | 33 | 8 | 15 | 14 | 37 |
| Police & Fire | 4 | 4 | 8 | 16 | 4 | 4 | 6 | 14 |
| Total | 12 | 17 | 20 | 49 | 12 | 19 | 20 | 51 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 7 | 12 | N/A | 19 | 7 | 14 | N/A | 21 |
| Police & Fire | 10 | 4 | N/A | 14 | 11 | 4 | N/A | 15 |
| Total | 17 | 16 | N/A | 33 | 18 | 18 | N/A | 36 |
| **Dormant Members** | | | | | | | | |
| General Service | 9 | 5 | 0 | 14 | 8 | 3 | 0 | 11 |
| Police & Fire | 1 | 1 | 0 | 2 | 2 | 0 | 0 | 2 |
| Total | 10 | 6 | 0 | 16 | 10 | 3 | 0 | 13 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 13 | 2 | 0 | 15 | 14 | 1 | 0 | 15 |
| Police & Fire | 15 | 1 | 0 | 16 | 13 | 0 | 0 | 13 |
| Total | 28 | 3 | 0 | 31 | 27 | 1 | 0 | 28 |
| **Grand Total Number of Members** | **67** | **42** | **20** | **129** | **67** | **41** | **20** | **128** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | 2 | | | | | | | **3** |
| **35-39** | | | 4 | | | | | | | **4** |
| **40-44** | | | 2 | 3 | | | | | | **5** |
| **45-49** | | 1 | 1 | 3 | 1 | | | | | **6** |
| **50-54** | | | | 2 | | | | | | **2** |
| **55-59** | | | 1 | 1 | 2 | 2 | | | | **6** |
| **60-64** | | 1 | 2 | | | | | | | **3** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **3** | **12** | **9** | **3** | **2** | | | | **29** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 1 | 232 |
| **30-34** | 1 | |
| **35-39** | 2 | 880 |
| **40-44** | | |
| **45-49** | | |
| **50-54** | 3 | 408 |
| **55-59** | 6 | 612 |
| **60-64** | 3 | 442 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 16 | 513 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 419 |
| **55-59** | 7 | 2,089 |
| **60-64** | 6 | 801 |
| **65-69** | 8 | 2,163 |
| **70-74** | 2 | 836 |
| **75-79** | 4 | 1,138 |
| **80-84** | 3 | 405 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 31 | 1,438 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Cottage Grove/2127
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Cottage Grove/2127

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Cottage Grove -- #2127

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Cottage Grove to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Cottage Grove.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Cottage Grove*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.46% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 8.04% | 8.04% | 8.04% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.65%** | **14.46%** | **17.19%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.24%** | **14.95%** | **17.68%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 87%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.50% | 16.50% |
| Minimum July 1, 2015 Rate | 13.20% | 9.90% |
| Maximum July 1, 2015 Rate | 19.80% | 23.10% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 25 | 30 |
| Amortization factor | 15.686 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.91% | 5.76% | 5.76% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.50% | 8.04% | 8.04% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $31,230,442 | $28,056,666 | ($3,173,776) | 111% | $2,714,463 | (117%) |
| 12/31/2007 | 33,138,078 | 29,918,707 | (3,219,371) | 111% | 3,349,203 | (96%) |
| 12/31/2008 | 25,591,390 | 31,631,437 | 6,040,047 | 81% | 3,544,495 | 170% |
| 12/31/2009 | 29,216,208 | 32,864,480 | 3,648,272 | 89% | 3,747,512 | 97% |
| 12/31/2010 | 31,425,921 | 34,333,400 | 2,907,479 | 92% | 3,750,985 | 78% |
| 12/31/2011 | 31,039,561 | 35,814,645 | 4,775,084 | 87% | 3,832,180 | 125% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Cottage Grove*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $4,775,084 | $2,907,479 |
| Allocated pooled OPSRP UAL | 65,386 | 46,573 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 4,840,470 | 2,954,052 |
| Combined valuation payroll | 3,832,180 | 3,750,985 |
| Net pension UAL as a percentage of payroll | 126% | 79% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $99,275 | $134,955 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $234,208 | $226,297 |
| Tier 1/Tier 2 valuation payroll | 2,769,559 | 2,799,966 |
| Tier 1/Tier 2 pension normal cost rate | 8.46% | 8.08% |
| Tier 1/ Tier 2 Actuarial accrued liability | $35,814,645 | $34,333,400 |
| Actuarial asset value | 31,039,561 | 31,425,921 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 4,775,084 | 2,907,479 |
| Tier 1/ Tier 2 Funded status | 87% | 92% |
| Combined valuation payroll | $3,832,180 | $3,750,985 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 125% | 78% |
| Tier 1/Tier 2 UAL rate | 8.04% | 5.48% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 48 | 51 |
| Tier 1/Tier 2 dormant members | 29 | 21 |
| Tier 1/Tier 2 retirees and beneficiaries | 83 | 78 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 3,832,180 | 3,750,985 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $6,480,785 | $6,809,632 |
| 2. Employer reserves | 14,806,914 | 14,940,087 |
| 3. Benefits in force reserve | 9,751,862 | 9,676,202 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$31,039,561** | **$31,425,921** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $31,425,921 |
| 2. Regular employer contributions | 343,276 |
| 3. Benefit payments and expenses | (1,633,857) |
| 4. Adjustments[2] | (39,928) |
| 5. Interest credited | 944,149 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$31,039,561** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $89,287 | $93,182 |
| Tier 1 General Service | 38,148 | 32,085 |
| Tier 2 Police & Fire | 25,642 | 24,704 |
| Tier 2 General Service | 81,131 | 76,326 |
| **Total** | **$234,208** | **$226,297** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $234,208 | $234,208 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $6,390,410 | $7,744,601 |
| ▪ Tier 1 General Service | 6,155,833 | 6,235,742 |
| ▪ Tier 2 Police & Fire | 487,918 | 447,135 |
| ▪ Tier 2 General Service | 1,472,770 | 1,270,995 |
| ▪ **Total Active Members** | **$14,506,931** | **$15,698,473** |
| Dormant Members | 3,571,651 | 2,702,555 |
| Retired Members and Beneficiaries | 17,736,063 | 15,932,372 |
| **Total Actuarial Accrued Liability** | **$35,814,645** | **$34,333,400** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $35,814,645 | $35,814,645 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $35,814,645 | $34,333,400 |
| 2. Actuarial value of assets | 31,039,561 | 31,425,921 |
| 3. Unfunded accrued liability *(1. – 2.)* | 4,775,084 | 2,907,479 |
| 4. Funded percentage *(2. ÷ 1.)* | 87% | 92% |
| 5. Combined valuation payroll | $3,832,180 | $3,750,985 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 125% | 78% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($3,819,951) | ($314,806) | ($292,195) | ($3,797,340) | ($326,611) |
| December 31, 2009 | $7,500,657 | $572,972 | $575,662 | $7,503,347 | $594,458 |
| December 31, 2011 | N/A | N/A | N/A | $1,069,077 | $78,951 |
| **Total** | | | | **$4,775,084** | **$346,798** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $34,333,400 |
| b. Normal cost at December 31, 2010 | 226,297 |
| c. Benefit payments during 2011 | (1,623,148) |
| d. Interest at 8.0% to December 31, 2011 | 2,699,850 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 35,636,399 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 35,636,399 |
| 2. Actuarial accrued liability at December 31, 2011 | 35,814,645 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (178,246) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 31,425,921 |
| b. Contributions for 2011[1] | 343,276 |
| c. Benefit payments and expenses during 2011 | (1,633,857) |
| d. Interest at 8.0% to December 31, 2011 | 2,462,450 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 32,597,791 |
| 5. Actuarial value of assets at December 31, 2011 | 31,039,561 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,558,229) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($1,736,475)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,907,479** |
| 2. Expected increase | 131,130 |
| 3. Liability (gain)/loss | 178,246 |
| 4. Asset (gain)/loss | 1,558,229 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$4,775,084** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $89,287 | $666,092 | 13.40% | $93,182 | $721,074 | 12.92% |
| Tier 1 General Service | 38,148 | 1,108,035 | 3.44% | 32,085 | 1,111,536 | 2.89% |
| Tier 2 Police & Fire | 25,642 | 202,626 | 12.65% | 24,704 | 201,232 | 12.28% |
| Tier 2 General Service | 81,131 | 792,806 | 10.23% | 76,326 | 766,124 | 9.96% |
| **Total** | **$234,208** | **$2,769,559** | **8.46%** | **$226,297** | **$2,799,966** | **8.08%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $4,775,084 | $2,907,479 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 346,798 | 201,063 |
| 3. Combined valuation payroll | 3,832,180 | 3,750,985 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 9.05% | 5.36% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.46% | 8.08% |
| b. Tier 1/Tier 2 UAL rate | 9.05% | 5.36% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.64% | 13.56% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 13.50% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.50% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.70% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 87% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.50% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.50% |
| 7. | July 1, 2013 total pension rate, before adjustment | 17.64% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.14%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 9.05% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 7.91% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.50% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.46% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.46% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.50% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.46% | 8.08% |
| b. Tier 1/Tier 2 UAL rate | 7.91% | 5.36% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.50% | 13.56% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,108,035 | $666,092 | $1,774,127 |
| Tier 2 | 792,806 | 202,626 | 995,432 |
| Tier 1/Tier 2 valuation payroll | 1,900,841 | 868,718 | 2,769,559 |
| OPSRP valuation payroll | 840,192 | 222,429 | 1,062,621 |
| **Combined valuation payroll** | **$2,741,033** | **$1,091,147** | **$3,832,180** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 18 | 18 | 23 | 59 | 19 | 19 | 24 | 62 |
| Police & Fire | 9 | 3 | 3 | 15 | 10 | 3 | 3 | 16 |
| Total | 27 | 21 | 26 | 74 | 29 | 22 | 27 | 78 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 10 | 15 | N/A | 25 | 15 | 17 | N/A | 32 |
| Police & Fire | 18 | 8 | N/A | 26 | 22 | 12 | N/A | 34 |
| Total | 28 | 23 | N/A | 51 | 37 | 29 | N/A | 66 |
| **Dormant Members** | | | | | | | | |
| General Service | 15 | 4 | 2 | 21 | 12 | 4 | 2 | 18 |
| Police & Fire | 6 | 4 | 0 | 10 | 5 | 0 | 0 | 5 |
| Total | 21 | 8 | 2 | 31 | 17 | 4 | 2 | 23 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 41 | 3 | 0 | 44 | 42 | 0 | 0 | 42 |
| Police & Fire | 38 | 1 | 0 | 39 | 35 | 1 | 0 | 36 |
| Total | 79 | 4 | 0 | 83 | 77 | 1 | 0 | 78 |
| **Grand Total Number of Members** | **155** | **56** | **28** | **239** | **160** | **56** | **29** | **245** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | 2 | | | | | | | **3** |
| **35-39** | | 1 | 2 | | | | | | | **3** |
| **40-44** | | 1 | 2 | 2 | 1 | | | | | **6** |
| **45-49** | | 1 | 2 | 1 | 2 | | | | | **6** |
| **50-54** | | 1 | 3 | 2 | 1 | 3 | 2 | | | **12** |
| **55-59** | | 1 | 1 | 2 | 2 | | 2 | 1 | | **9** |
| **60-64** | | | 1 | 1 | 1 | 2 | 1 | | | **6** |
| **65-69** | | | | | 1 | | | | | **1** |
| **70-74** | | 1 | | | | | | | | **1** |
| **75+** | | | 1 | | | | | | | **1** |
| **Total** | | **7** | **14** | **8** | **8** | **5** | **5** | **1** | | **48** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 1 | 143 |
| **30-34** | | |
| **35-39** | 2 | 647 |
| **40-44** | 3 | 871 |
| **45-49** | 4 | 1,688 |
| **50-54** | 10 | 2,339 |
| **55-59** | 5 | 944 |
| **60-64** | 3 | 1,612 |
| **65-69** | 1 | 320 |
| **70-74** | | |
| **75+** | | |
| **Total** | 29 | 1,520 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 1 | 250 |
| **45-49** | 2 | 1,540 |
| **50-54** | 4 | 2,735 |
| **55-59** | 13 | 1,623 |
| **60-64** | 16 | 1,525 |
| **65-69** | 23 | 1,601 |
| **70-74** | 7 | 996 |
| **75-79** | 9 | 823 |
| **80-84** | 4 | 1,196 |
| **85-89** | 3 | 730 |
| **90-94** | 1 | 102 |
| **95-99** | | |
| **100+** | | |
| **Total** | 83 | 1,422 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Culver/2257
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Culver/2257

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Culver -- #2257

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Culver to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Culver.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Culver*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 4.08% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 10.33% | 10.33% | 10.33% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.56%** | **16.75%** | **19.48%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.15%** | **17.24%** | **19.97%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 74%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.41% | 14.41% |
| Minimum July 1, 2015 Rate | 11.41% | 8.41% |
| Maximum July 1, 2015 Rate | 17.41% | 20.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 26 | 30 |
| Amortization factor | 15.802 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.94% | 8.37% | 8.37% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.41% | 10.33% | 10.33% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $586,079 | $541,136 | ($44,943) | 108% | $130,229 | (35%) |
| 12/31/2007 | 537,016 | 545,213 | 8,197 | 99% | 106,108 | 8% |
| 12/31/2008 | 413,487 | 564,527 | 151,040 | 73% | 119,335 | 127% |
| 12/31/2009 | 466,386 | 607,627 | 141,241 | 77% | 99,352 | 142% |
| 12/31/2010 | 502,571 | 642,042 | 139,471 | 78% | 102,486 | 136% |
| 12/31/2011 | 498,653 | 673,446 | 174,793 | 74% | 108,081 | 162% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Culver*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $174,793 | $139,471 |
| Allocated pooled OPSRP UAL | 1,844 | 1,272 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 176,637 | 140,743 |
| Combined valuation payroll | 108,081 | 102,486 |
| Net pension UAL as a percentage of payroll | 163% | 137% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,800 | $3,687 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $3,710 | $3,223 |
| Tier 1/Tier 2 valuation payroll | 90,882 | 88,393 |
| Tier 1/Tier 2 pension normal cost rate | 4.08% | 3.65% |
| Tier 1/ Tier 2 Actuarial accrued liability | $673,446 | $642,042 |
| Actuarial asset value | 498,653 | 502,571 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 174,793 | 139,471 |
| Tier 1/ Tier 2 Funded status | 74% | 78% |
| Combined valuation payroll | $108,081 | $102,486 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 162% | 136% |
| Tier 1/Tier 2 UAL rate | 10.33% | 9.56% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### OPSRP

| ($ in millions) | Actuarial Valuation as of | |
| --- | --- | --- |
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### Retiree Healthcare

| ($ in millions) | Actuarial Valuation as of | |
| --- | --- | --- |
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 108,081 | 102,486 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $127,933 | $135,039 |
| 2. Employer reserves | 211,614 | 215,409 |
| 3. Benefits in force reserve | 159,106 | 152,123 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$498,653** | **$502,571** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $502,571 |
| 2. | Regular employer contributions | 7,369 |
| 3. | Benefit payments and expenses | (26,657) |
| 4. | Adjustments[2] | (966) |
| 5. | Interest credited | 16,336 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$498,653** |

1 *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

2 *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 3,710 | 3,223 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$3,710** | **$3,223** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $3,710 | $3,710 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 367,634 | 373,048 |
| ▪ Tier 2 Police & Fire | 314 | 0 |
| ▪ Tier 2 General Service | 909 | 803 |
| ▪ **Total Active Members** | **$368,857** | **$373,851** |
| Dormant Members | 15,216 | 17,712 |
| Retired Members and Beneficiaries | 289,373 | 250,479 |
| **Total Actuarial Accrued Liability** | **$673,446** | **$642,042** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $673,446 | $673,446 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $673,446 | $642,042 |
| 2. Actuarial value of assets | 498,653 | 502,571 |
| 3. Unfunded accrued liability *(1. – 2.)* | 174,793 | 139,471 |
| 4. Funded percentage *(2. ÷ 1.)* | 74% | 78% |
| 5. Combined valuation payroll | $108,081 | $102,486 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 162% | 136% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($8,054) | ($663) | ($616) | ($8,007) | ($688) |
| December 31, 2009 | $149,764 | $11,441 | $11,494 | $149,817 | $11,870 |
| December 31, 2011 | N/A | N/A | N/A | $32,983 | $2,436 |
| **Total** | | | | **$174,793** | **$13,618** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $642,042 |
| b. Normal cost at December 31, 2010 | 3,223 |
| c. Benefit payments during 2011 | (26,482) |
| d. Interest at 8.0% to December 31, 2011 | 50,562 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 669,345 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 669,345 |
| 2. Actuarial accrued liability at December 31, 2011 | 673,446 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (4,101) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 502,571 |
| b. Contributions for 2011[1] | 7,369 |
| c. Benefit payments and expenses during 2011 | (26,657) |
| d. Interest at 8.0% to December 31, 2011 | 39,434 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 522,717 |
| 5. Actuarial value of assets at December 31, 2011 | 498,653 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (24,064) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($28,165)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$139,471** |
| 2. Expected increase | 7,157 |
| 3. Liability (gain)/loss | 4,101 |
| 4. Asset (gain)/loss | 24,064 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$174,793** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 3,710 | 90,882 | 4.08% | 3,223 | 88,393 | 3.65% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$3,710** | **$90,882** | **4.08%** | **$3,223** | **$88,393** | **3.65%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $174,793 | $139,471 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 13,618 | 10,613 |
| 3. Combined valuation payroll | 108,081 | 102,486 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 12.60% | 10.36% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 4.08% | 3.65% |
| b. Tier 1/Tier 2 UAL rate | 12.60% | 10.36% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.81% | 14.13% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 9.61% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.61% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.92% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 74% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.80% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.81% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.41% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.81% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.40%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 12.60% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 10.20% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.41% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 4.08% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 4.08% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 4.08% | 3.65% |
| b. Tier 1/Tier 2 UAL rate | 10.20% | 9.44% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.41% | 13.21% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $90,882 | $0 | $90,882 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 90,882 | 0 | 90,882 |
| OPSRP valuation payroll | 17,199 | 0 | 17,199 |
| **Combined valuation payroll** | **$108,081** | **$0** | **$108,081** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 0 | 1 | 3 | 2 | 0 | 1 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 1 | 3 | 2 | 0 | 1 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 3 | 2 | N/A | 5 | 5 | 1 | N/A | 6 |
| Police & Fire | 0 | 1 | N/A | 1 | 0 | 0 | N/A | 0 |
| Total | 3 | 3 | N/A | 6 | 5 | 1 | N/A | 6 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 1 | 1 | 3 | 0 | 1 | 1 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 1 | 1 | 1 | 3 | 0 | 2 | 1 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 2 |
| Police & Fire | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Total | 4 | 1 | 0 | 5 | 3 | 1 | 0 | 4 |
| **Grand Total Number of Members** | **10** | **5** | **2** | **17** | **10** | **4** | **2** | **16** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | 1 | | | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | 1 | | | | | **1** |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | | **1** | **1** | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | 316 |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 15 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 2 | 166 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 582 |
| 60-64 | 2 | 109 |
| 65-69 | 1 | 1,143 |
| 70-74 | 1 | 209 |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 5 | 430 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Dufur/2262
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman



In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Dufur/2262

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Dufur -- #2262

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Dufur to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Dufur.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Dufur*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 11.84% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 6.50% | 6.50% | 6.50% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **18.49%** | **12.92%** | **15.65%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **19.08%** | **13.41%** | **16.14%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 18.34% | 18.34% |
| Minimum July 1, 2015 Rate | 14.67% | 11.00% |
| Maximum July 1, 2015 Rate | 22.01% | 25.68% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 22 |
| Amortization factor | 17.175 | 14.206 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.74% | 8.78% | 8.78% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 22.11% | 10.27% | 10.27% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $674,055 | $650,275 | ($23,780) | 104% | $60,362 | (39%) |
| 12/31/2007 | 704,741 | 671,034 | (33,707) | 105% | 91,331 | (37%) |
| 12/31/2008 | 511,116 | 683,432 | 172,316 | 75% | 90,910 | 190% |
| 12/31/2009 | 586,795 | 697,077 | 110,282 | 84% | 89,502 | 123% |
| 12/31/2010 | 592,439 | 715,139 | 122,700 | 83% | 62,947 | 195% |
| 12/31/2011 | 572,637 | 733,287 | 160,650 | 78% | 91,905 | 175% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Dufur*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $160,650 | $122,700 |
| Allocated pooled OPSRP UAL | 1,568 | 782 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 162,218 | 123,482 |
| Combined valuation payroll | 91,905 | 62,947 |
| Net pension UAL as a percentage of payroll | 177% | 196% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,381 | $2,265 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5,151 | $4,500 |
| Tier 1/Tier 2 valuation payroll | 43,521 | 41,368 |
| Tier 1/Tier 2 pension normal cost rate | 11.84% | 10.88% |
| Tier 1/ Tier 2 Actuarial accrued liability | $733,287 | $715,139 |
| Actuarial asset value | 572,637 | 592,439 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 160,650 | 122,700 |
| Tier 1/ Tier 2 Funded status | 78% | 83% |
| Combined valuation payroll | $91,905 | $62,947 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 175% | 195% |
| Tier 1/Tier 2 UAL rate | 6.50% | 6.86% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 5 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 91,905 | 62,947 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $31,353 | $31,103 |
| 2. Employer reserves | 199,274 | 187,305 |
| 3. Benefits in force reserve | 342,010 | 374,031 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$572,637** | **$592,439** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $592,439 |
| 2. | Regular employer contributions | 7,671 |
| 3. | Benefit payments and expenses | (57,301) |
| 4. | Adjustments[2] | 17,805 |
| 5. | Interest credited | 12,023 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$572,637** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 5,151 | 4,500 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$5,151** | **$4,500** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $5,151 | $5,151 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 111,262 | 99,278 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$111,262** | **$99,278** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 622,025 | 615,861 |
| **Total Actuarial Accrued Liability** | **$733,287** | **$715,139** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $733,287 | $733,287 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $733,287 | $715,139 |
| 2. Actuarial value of assets | 572,637 | 592,439 |
| 3. Unfunded accrued liability *(1. – 2.)* | 160,650 | 122,700 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 83% |
| 5. Combined valuation payroll | $91,905 | $62,947 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 175% | 195% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($72,386) | ($5,966) | ($5,537) | ($71,957) | ($6,190) |
| December 31, 2009 | $183,407 | $14,010 | $14,076 | $183,473 | $14,535 |
| December 31, 2011 | N/A | N/A | N/A | $49,134 | $3,629 |
| **Total** | | | | **$160,650** | **$11,974** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $715,139 |
| b. Normal cost at December 31, 2010 | 4,500 |
| c. Benefit payments during 2011 | (56,926) |
| d. Interest at 8.0% to December 31, 2011 | 55,294 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 718,007 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 718,007 |
| 2. Actuarial accrued liability at December 31, 2011 | 733,287 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (15,280) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 592,439 |
| b. Contributions for 2011[1] | 7,671 |
| c. Benefit payments and expenses during 2011 | (57,301) |
| d. Interest at 8.0% to December 31, 2011 | 45,410 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 588,219 |
| 5. Actuarial value of assets at December 31, 2011 | 572,637 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (15,582) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($30,862)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$122,700** |
| 2. Expected increase | 7,088 |
| 3. Liability (gain)/loss | 15,280 |
| 4. Asset (gain)/loss | 15,582 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$160,650** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 5,151 | 43,521 | 11.84% | 4,500 | 41,368 | 10.88% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$5,151** | **$43,521** | **11.84%** | **$4,500** | **$41,368** | **10.88%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $160,650 | $122,700 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 11,974 | 8,906 |
| 3. Combined valuation payroll | 91,905 | 62,947 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 13.03% | 14.15% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.84% | 10.88% |
| b. Tier 1/Tier 2 UAL rate | 13.03% | 14.15% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 25.00% | 25.15% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 14.74% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.74% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.95% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 78% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.60% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.14% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 18.34% |
| 7. | July 1, 2013 total pension rate, before adjustment | 25.00% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (6.66%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 13.03% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 6.37% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 18.34% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 11.84% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 11.84% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 18.34% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.84% | 10.88% |
| b. Tier 1/Tier 2 UAL rate | 6.37% | 6.74% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 18.34% | 17.74% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $43,521 | $0 | $43,521 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 43,521 | 0 | 43,521 |
| OPSRP valuation payroll | 48,384 | 0 | 48,384 |
| **Combined valuation payroll** | **$91,905** | **$0** | **$91,905** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 2 | 3 | 1 | 0 | 1 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 2 | 3 | 1 | 0 | 1 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| **Grand Total Number of Members** | **7** | **0** | **3** | **10** | **7** | **0** | **2** | **9** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | 1 | | | | | | **1** |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | | **1** | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 230 |
| 60-64 | 1 | 2,621 |
| 65-69 | 1 | 851 |
| 70-74 | 1 | 53 |
| 75-79 | | |
| 80-84 | 1 | 247 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 5 | 800 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Eagle Point/2282
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Eagle Point/2282

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Eagle Point/2282

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Eagle Point -- #2282

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Eagle Point to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Eagle Point.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Eagle Point*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 14.29% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.06%) | (0.06%) | (0.06%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.38%** | **6.36%** | **9.09%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.97%** | **6.85%** | **9.58%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 79%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.23% | 14.23% |
| Minimum July 1, 2015 Rate | 11.23% | 8.23% |
| Maximum July 1, 2015 Rate | 17.23% | 20.23% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.36% | 1.58% | 1.58% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.78% | 4.49% | 4.49% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $2,145,211 | $1,638,405 | ($506,806) | 131% | $525,520 | (96%) |
| 12/31/2007 | 2,332,061 | 1,776,883 | (555,178) | 131% | 661,509 | (84%) |
| 12/31/2008 | 1,747,730 | 1,982,202 | 234,472 | 88% | 783,617 | 30% |
| 12/31/2009 | 2,041,520 | 2,211,444 | 169,924 | 92% | 663,580 | 26% |
| 12/31/2010 | 2,057,505 | 2,442,645 | 385,140 | 84% | 614,657 | 63% |
| 12/31/2011 | 2,019,516 | 2,540,783 | 521,267 | 79% | 689,745 | 76% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Eagle Point*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $521,267 | $385,140 |
| Allocated pooled OPSRP UAL | 11,769 | 7,632 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 533,036 | 392,772 |
| Combined valuation payroll | 689,745 | 614,657 |
| Net pension UAL as a percentage of payroll | 77% | 64% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $17,868 | $22,114 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $64,682 | $62,124 |
| Tier 1/Tier 2 valuation payroll | 452,692 | 446,947 |
| Tier 1/Tier 2 pension normal cost rate | 14.29% | 13.90% |
| Tier 1/ Tier 2 Actuarial accrued liability | $2,540,783 | $2,442,645 |
| Actuarial asset value | 2,019,516 | 2,057,505 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 521,267 | 385,140 |
| Tier 1/ Tier 2 Funded status | 79% | 84% |
| Combined valuation payroll | $689,745 | $614,657 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 76% | 63% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | (0.06%) | 0.03% |
| Tier 1/Tier 2 active members [1] | 7 | 7 |
| Tier 1/Tier 2 dormant members | 1 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 8 | 7 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 689,745 | 614,657 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $103,512 | $98,659 |
| 2. Employer reserves | 963,658 | 909,122 |
| 3. Benefits in force reserve | 952,346 | 1,049,724 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$2,019,516** | **$2,057,505** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $2,057,505 |
| 2. | Regular employer contributions | 34,026 |
| 3. | Benefit payments and expenses | (159,559) |
| 4. | Adjustments[2] | 42,182 |
| 5. | Interest credited | 45,362 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,019,516** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $19,452 | $18,961 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 45,230 | 43,163 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$64,682** | **$62,124** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $64,682 | $64,682 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $265,551 | $246,159 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 543,167 | 468,062 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$808,718** | **$714,221** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 1,732,065 | 1,728,424 |
| **Total Actuarial Accrued Liability** | **$2,540,783** | **$2,442,645** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $2,540,783 | $2,540,783 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $2,540,783 | $2,442,645 |
| 2. Actuarial value of assets | 2,019,516 | 2,057,505 |
| 3. Unfunded accrued liability *(1. – 2.)* | 521,267 | 385,140 |
| 4. Funded percentage *(2. ÷ 1.)* | 79% | 84% |
| 5. Combined valuation payroll | $689,745 | $614,657 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 76% | 63% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($604,508) | ($49,819) | ($46,240) | ($600,929) | ($51,687) |
| December 31, 2009 | $778,340 | $59,457 | $59,736 | $778,619 | $61,687 |
| December 31, 2011 | N/A | N/A | N/A | $343,577 | $25,373 |
| **Total** | | | | **$521,267** | **$35,373** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $2,442,645 |
| b. Normal cost at December 31, 2010 | 62,124 |
| c. Benefit payments during 2011 | (158,513) |
| d. Interest at 8.0% to December 31, 2011 | 194,041 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 2,540,297 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 2,540,297 |
| 2. Actuarial accrued liability at December 31, 2011 | 2,540,783 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (486) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,057,505 |
| b. Contributions for 2011[1] | 34,026 |
| c. Benefit payments and expenses during 2011 | (159,559) |
| d. Interest at 8.0% to December 31, 2011 | 159,579 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,091,551 |
| 5. Actuarial value of assets at December 31, 2011 | 2,019,516 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (72,035) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($72,521)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$385,140** |
| 2. Expected increase | 63,606 |
| 3. Liability (gain)/loss | 486 |
| 4. Asset (gain)/loss | 72,035 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$521,267** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $19,452 | $126,225 | 15.41% | $18,961 | $128,123 | 14.80% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 45,230 | 326,467 | 13.85% | 43,163 | 318,824 | 13.54% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$64,682** | **$452,692** | **14.29%** | **$62,124** | **$446,947** | **13.90%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $521,267 | $385,140 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 35,373 | 25,243 |
| 3. Combined valuation payroll | 689,745 | 614,657 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 5.13% | 4.11% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.29% | 13.90% |
| b. Tier 1/Tier 2 UAL rate | 5.13% | 4.11% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 19.55% | 18.13% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.93% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.93% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.19% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 79% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.30% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.63% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.23% |
| 7. July 1, 2013 total pension rate, before adjustment | 19.55% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (5.32%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 5.13% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.19%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.23% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 14.29% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.29% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.23% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.29% | 13.90% |
| b. Tier 1/Tier 2 UAL rate | (0.19%) | (0.09%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.23% | 13.93% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $126,225 | $126,225 |
| Tier 2 | 0 | 326,467 | 326,467 |
| Tier 1/Tier 2 valuation payroll | 0 | 452,692 | 452,692 |
| OPSRP valuation payroll | 0 | 237,053 | 237,053 |
| **Combined valuation payroll** | **$0** | **$689,745** | **$689,745** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 2 | 5 | 4 | 11 | 2 | 5 | 3 | 10 |
| Total | 2 | 5 | 4 | 11 | 2 | 5 | 3 | 10 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 1 | N/A | 1 | 1 | 1 | N/A | 2 |
| Total | 0 | 1 | N/A | 1 | 1 | 1 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 8 | 0 | 0 | 8 | 7 | 0 | 0 | 7 |
| Total | 8 | 0 | 0 | 8 | 7 | 0 | 0 | 7 |
| **Grand Total Number of Members** | **10** | **7** | **4** | **21** | **10** | **6** | **3** | **19** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 1 | | | | | | | | 1 |
| 35-39 | | | | 1 | | | | | | 1 |
| 40-44 | | 1 | 1 | | | | | | | 2 |
| 45-49 | | | 1 | | | | | | | 1 |
| 50-54 | | | | | | | | | | |
| 55-59 | | | 1 | | | | | | | 1 |
| 60-64 | | | | 1 | | | | | | 1 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | 2 | 3 | 2 | | | | | | 7 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 1 | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 2 | 1,774 |
| 60-64 | 2 | 876 |
| 65-69 | 3 | 1,670 |
| 70-74 | | |
| 75-79 | 1 | 573 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 8 | 1,360 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Eugene/2111
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Eugene/2111

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Eugene/2111

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Eugene -- #2111

**Secondary Employers**

2141 City Of Eugene Public Library

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Eugene to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Eugene.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Eugene*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 11.01% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.35% | 5.35% | 5.35% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.51%** | **11.77%** | **14.50%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.10%** | **12.26%** | **14.99%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 82%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.36% | 16.36% |
| Minimum July 1, 2015 Rate | 13.09% | 9.82% |
| Maximum July 1, 2015 Rate | 19.63% | 22.90% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.01% | 6.12% | 6.12% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.83% | 7.82% | 7.82% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $641,037,148 | $593,561,815 | ($47,475,333) | 108% | $82,817,527 | (57%) |
| 12/31/2007 | 680,846,717 | 612,554,606 | (68,292,111) | 111% | 85,563,475 | (80%) |
| 12/31/2008 | 511,725,377 | 636,242,912 | 124,517,535 | 80% | 87,775,282 | 142% |
| 12/31/2009 | 572,595,446 | 664,728,789 | 92,133,343 | 86% | 89,005,209 | 104% |
| 12/31/2010 | 608,092,209 | 692,573,860 | 84,481,651 | 88% | 92,340,211 | 91% |
| 12/31/2011 | 592,998,990 | 719,826,602 | 126,827,612 | 82% | 95,549,026 | 133% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Eugene*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $126,827,612 | $84,481,651 |
| Allocated pooled OPSRP UAL | 1,630,293 | 1,146,518 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 128,457,905 | 85,628,169 |
| Combined valuation payroll | 95,549,026 | 92,340,211 |
| Net pension UAL as a percentage of payroll | 134% | 93% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,475,246 | $3,322,255 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $7,382,877 | $6,811,205 |
| Tier 1/Tier 2 valuation payroll | 67,033,298 | 66,631,516 |
| Tier 1/Tier 2 pension normal cost rate | 11.01% | 10.22% |
| Tier 1/ Tier 2 Actuarial accrued liability | $719,826,602 | $692,573,860 |
| Actuarial asset value | 592,998,990 | 608,092,209 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 126,827,612 | 84,481,651 |
| Tier 1/ Tier 2 Funded status | 82% | 88% |
| Combined valuation payroll | $95,549,026 | $92,340,211 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 133% | 91% |
| Tier 1/Tier 2 UAL rate | 5.35% | 6.14% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 922 | 981 |
| Tier 1/Tier 2 dormant members | 396 | 379 |
| Tier 1/Tier 2 retirees and beneficiaries | 1,298 | 1,221 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 95,549,026 | 92,340,211 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $84,184,525 | $92,645,543 |
| 2. Employer reserves | 264,049,109 | 265,895,481 |
| 3. Benefits in force reserve | 244,765,356 | 249,551,185 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$592,998,990** | **$608,092,209** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $608,092,209 |
| 2. Regular employer contributions | 8,530,625 |
| 3. Benefit payments and expenses | (41,008,746) |
| 4. Adjustments[2] | 684,633 |
| 5. Interest credited | 16,700,269 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$592,998,990** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $2,241,982 | $2,139,244 |
| Tier 1 General Service | 1,349,335 | 1,167,617 |
| Tier 2 Police & Fire | 1,677,660 | 1,532,709 |
| Tier 2 General Service | 2,113,900 | 1,971,635 |
| **Total** | **$7,382,877** | **$6,811,205** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $7,382,877 | $7,382,877 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $65,280,528 | $66,734,300 |
| ▪ Tier 1 General Service | 119,085,824 | 127,108,099 |
| ▪ Tier 2 Police & Fire | 19,349,197 | 16,290,115 |
| ▪ Tier 2 General Service | 27,884,083 | 24,426,185 |
| ▪ **Total Active Members** | **$231,599,632** | **$234,558,699** |
| Dormant Members | 43,063,373 | 47,116,069 |
| Retired Members and Beneficiaries | 445,163,597 | 410,899,092 |
| **Total Actuarial Accrued Liability** | **$719,826,602** | **$692,573,860** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $719,826,602 | $719,826,602 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### Summary of UAL

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $719,826,602 | $692,573,860 |
| 2. Actuarial value of assets | 592,998,990 | 608,092,209 |
| 3. Unfunded accrued liability *(1. – 2.)* | 126,827,612 | 84,481,651 |
| 4. Funded percentage *(2. ÷ 1.)* | 82% | 88% |
| 5. Combined valuation payroll | $95,549,026 | $92,340,211 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 133% | 91% |

### Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($81,459,331) | ($6,713,125) | ($6,230,980) | ($80,977,186) | ($6,964,867) |
| December 31, 2009 | $174,327,424 | $13,316,782 | $13,379,321 | $174,389,963 | $13,816,161 |
| December 31, 2011 | N/A | N/A | N/A | $33,414,835 | $2,467,679 |
| **Total** | | | | **$126,827,612** | **$9,318,973** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $692,573,860 |
| b. Normal cost at December 31, 2010 | 6,811,205 |
| c. Benefit payments during 2011 | (40,739,951) |
| d. Interest at 8.0% to December 31, 2011 | 54,321,207 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 712,966,321 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 712,966,321 |
| 2. Actuarial accrued liability at December 31, 2011 | 719,826,602 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (6,860,281) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 608,092,209 |
| b. Contributions for 2011[1] | 8,530,625 |
| c. Benefit payments and expenses during 2011 | (41,008,746) |
| d. Interest at 8.0% to December 31, 2011 | 47,348,252 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 622,962,339 |
| 5. Actuarial value of assets at December 31, 2011 | 592,998,990 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (29,963,349) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($36,823,630)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$84,481,651** |
| 2. Expected increase | 5,522,331 |
| 3. Liability (gain)/loss | 6,860,281 |
| 4. Asset (gain)/loss | 29,963,349 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$126,827,612** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $2,241,982 | $13,054,093 | 17.17% | $2,139,244 | $13,426,070 | 15.93% |
| Tier 1 General Service | 1,349,335 | 22,822,204 | 5.91% | 1,167,617 | 23,192,984 | 5.03% |
| Tier 2 Police & Fire | 1,677,660 | 11,598,087 | 14.46% | 1,532,709 | 10,979,651 | 13.96% |
| Tier 2 General Service | 2,113,900 | 19,558,914 | 10.81% | 1,971,635 | 19,032,811 | 10.36% |
| **Total** | **$7,382,877** | **$67,033,298** | **11.01%** | **$6,811,205** | **$66,631,516** | **10.22%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $126,827,612 | $84,481,651 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 9,318,973 | 5,984,320 |
| 3. Combined valuation payroll | 95,549,026 | 92,340,211 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 9.75% | 6.48% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.01% | 10.22% |
| b. Tier 1/Tier 2 UAL rate | 9.75% | 6.48% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 20.89% | 16.82% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 13.36% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.36% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.67% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 82% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.36% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.36% |
| 7. July 1, 2013 total pension rate, before adjustment | 20.89% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (4.53%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 9.75% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.22% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.36% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 11.01% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 11.01% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.36% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.01% | 10.22% |
| b. Tier 1/Tier 2 UAL rate | 5.22% | 6.02% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.36% | 16.36% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $22,822,204 | $13,054,093 | $35,876,297 |
| Tier 2 | 19,558,914 | 11,598,087 | 31,157,001 |
| Tier 1/Tier 2 valuation payroll | 42,381,118 | 24,652,180 | 67,033,298 |
| OPSRP valuation payroll | 20,157,197 | 8,358,531 | 28,515,728 |
| **Combined valuation payroll** | **$62,538,315** | **$33,010,711** | **$95,549,026** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 349 | 326 | 442 | 1,117 | 378 | 344 | 707 | 1,429 |
| Police & Fire | 125 | 122 | 102 | 349 | 136 | 123 | 86 | 345 |
| Total | 474 | 448 | 544 | 1,466 | 514 | 467 | 793 | 1,774 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 213 | 151 | N/A | 364 | 262 | 211 | N/A | 473 |
| Police & Fire | 16 | 16 | N/A | 32 | 20 | 18 | N/A | 38 |
| Total | 229 | 167 | N/A | 396 | 282 | 229 | N/A | 511 |
| **Dormant Members** | | | | | | | | |
| General Service | 220 | 142 | 23 | 385 | 224 | 120 | 11 | 355 |
| Police & Fire | 19 | 15 | 3 | 37 | 22 | 13 | 2 | 37 |
| Total | 239 | 157 | 26 | 422 | 246 | 133 | 13 | 392 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 876 | 49 | 4 | 929 | 838 | 28 | 0 | 866 |
| Police & Fire | 360 | 13 | 0 | 373 | 348 | 7 | 0 | 355 |
| Total | 1,236 | 62 | 4 | 1,302 | 1,186 | 35 | 0 | 1,221 |
| **Grand Total Number of Members** | **2,178** | **834** | **574** | **3,586** | **2,228** | **864** | **806** | **3,898** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | 3 | | | | | | | | **3** |
| **30-34** | | 25 | 8 | | | | | | | **33** |
| **35-39** | 1 | 39 | 41 | 16 | 1 | | | | | **98** |
| **40-44** | | 27 | 74 | 38 | 9 | 1 | | | | **149** |
| **45-49** | | 27 | 37 | 45 | 30 | 16 | | | | **155** |
| **50-54** | | 17 | 37 | 43 | 40 | 26 | 3 | | | **166** |
| **55-59** | | 18 | 31 | 43 | 58 | 33 | 13 | 2 | | **198** |
| **60-64** | | 5 | 28 | 18 | 21 | 19 | 7 | | | **98** |
| **65-69** | | 5 | 8 | 1 | 3 | 2 | 1 | | 1 | **21** |
| **70-74** | | | 1 | | | | | | | **1** |
| **75+** | | | | | | | | | | |
| **Total** | **1** | **166** | **265** | **204** | **162** | **97** | **24** | **2** | **1** | **922** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 4 | 65 |
| **30-34** | 16 | 1,073 |
| **35-39** | 32 | 1,064 |
| **40-44** | 49 | 793 |
| **45-49** | 54 | 971 |
| **50-54** | 61 | 1,330 |
| **55-59** | 94 | 1,404 |
| **60-64** | 57 | 1,109 |
| **65-69** | 19 | 637 |
| **70-74** | 5 | 129 |
| **75+** | 5 | 132 |
| **Total** | 396 | 1,092 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 9 | 1,591 |
| **45-49** | 3 | 1,365 |
| **50-54** | 18 | 3,178 |
| **55-59** | 145 | 3,427 |
| **60-64** | 360 | 2,670 |
| **65-69** | 315 | 2,345 |
| **70-74** | 179 | 2,065 |
| **75-79** | 137 | 1,765 |
| **80-84** | 57 | 1,693 |
| **85-89** | 55 | 1,140 |
| **90-94** | 16 | 1,432 |
| **95-99** | 4 | 325 |
| **100+** | | |
| **Total** | 1,298 | 2,363 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Fossil/2248
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Fossil/2248

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Fossil/2248

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Fossil -- #2248

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Fossil to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Fossil.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Fossil*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 5.72% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.69% | 2.69% | 2.69% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.56%** | **9.11%** | **11.84%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **9.15%** | **9.60%** | **12.33%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 88%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.41% | 8.41% |
| Minimum July 1, 2015 Rate | 5.41% | 2.41% |
| Maximum July 1, 2015 Rate | 11.41% | 14.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.01% | 0.64% | 0.64% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.44% | 4.72% | 4.72% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $549,450 | $472,034 | ($77,416) | 116% | $80,856 | (96%) |
| 12/31/2007 | 595,134 | 494,230 | (100,904) | 120% | 72,991 | (138%) |
| 12/31/2008 | 477,376 | 528,356 | 50,980 | 90% | 74,613 | 68% |
| 12/31/2009 | 538,898 | 546,282 | 7,384 | 99% | 77,993 | 9% |
| 12/31/2010 | 587,887 | 578,730 | (9,157) | 102% | 80,610 | (11%) |
| 12/31/2011 | 579,010 | 654,449 | 75,439 | 88% | 94,788 | 80% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Fossil*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $75,439 | ($9,157) |
| Allocated pooled OPSRP UAL | 1,617 | 1,001 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 77,056 | (8,156) |
| Combined valuation payroll | 94,788 | 80,610 |
| Net pension UAL as a percentage of payroll | 81% | (10%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,456 | $2,900 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $4,605 | $4,527 |
| Tier 1/Tier 2 valuation payroll | 80,458 | 80,610 |
| Tier 1/Tier 2 pension normal cost rate | 5.72% | 7.04% |
| Tier 1/ Tier 2 Actuarial accrued liability | $654,449 | $578,730 |
| Actuarial asset value | 579,010 | 587,887 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 75,439 | (9,157) |
| Tier 1/ Tier 2 Funded status | 88% | 102% |
| Combined valuation payroll | $94,788 | $80,610 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 80% | (11%) |
| Tier 1/Tier 2 UAL rate | 2.69% | (1.70%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 4 | 4 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 2 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 94,788 | 80,610 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $141,868 | $165,489 |
| 2. Employer reserves | 289,594 | 313,650 |
| 3. Benefits in force reserve | 147,548 | 108,748 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$579,010** | **$587,887** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $587,887 |
| 2. Regular employer contributions | 5,141 |
| 3. Benefit payments and expenses | (24,721) |
| 4. Adjustments [2] | (11,985) |
| 5. Interest credited | 22,688 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$579,010** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 4,605 | 4,527 |
| **Total** | **$4,605** | **$4,527** |

### ***Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes***

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $4,605 | $4,605 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 215,379 | 244,258 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 38,354 | 32,620 |
| ▪ **Total Active Members** | **$253,733** | **$276,878** |
| Dormant Members | 132,364 | 122,793 |
| Retired Members and Beneficiaries | 268,352 | 179,059 |
| **Total Actuarial Accrued Liability** | **$654,449** | **$578,730** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $654,449 | $654,449 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $654,449 | $578,730 |
| 2. Actuarial value of assets | 579,010 | 587,887 |
| 3. Unfunded accrued liability *(1. – 2.)* | 75,439 | (9,157) |
| 4. Funded percentage *(2. ÷ 1.)* | 88% | 102% |
| 5. Combined valuation payroll | $94,788 | $80,610 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 80% | (11%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($134,679) | ($11,100) | ($10,302) | ($133,881) | ($11,516) |
| December 31, 2009 | $142,844 | $10,911 | $10,963 | $142,896 | $11,320 |
| December 31, 2011 | N/A | N/A | N/A | $66,424 | $4,905 |
| **Total** | | | | **$75,439** | **$4,709** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $578,730 |
| b. Normal cost at December 31, 2010 | 4,527 |
| c. Benefit payments during 2011 | (24,559) |
| d. Interest at 8.0% to December 31, 2011 | 45,678 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 604,376 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 604,376 |
| 2. Actuarial accrued liability at December 31, 2011 | 654,449 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (50,073) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 587,887 |
| b. Contributions for 2011[1] | 5,141 |
| c. Benefit payments and expenses during 2011 | (24,721) |
| d. Interest at 8.0% to December 31, 2011 | 46,248 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 614,555 |
| 5. Actuarial value of assets at December 31, 2011 | 579,010 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (35,545) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($85,618)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($9,157)** |
| 2. Expected increase | (1,022) |
| 3. Liability (gain)/loss | 50,073 |
| 4. Asset (gain)/loss | 35,545 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$75,439** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 42,494 | 0.00% | 0 | 42,502 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 4,605 | 37,964 | 12.13% | 4,527 | 38,108 | 11.88% |
| **Total** | **$4,605** | **$80,458** | **5.72%** | **$4,527** | **$80,610** | **5.62%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $75,439 | ($9,157) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 4,709 | (1,468) |
| 3. Combined valuation payroll | 94,788 | 80,610 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.97% | (1.82%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.72% | 5.62% |
| b. Tier 1/Tier 2 UAL rate | 4.97% | (1.82%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.82% | 3.92% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 88% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. July 1, 2013 total pension rate, before adjustment | 10.82% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.41%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.97% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.56% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.41% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 5.72% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 5.72% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.72% | 7.04% |
| b. Tier 1/Tier 2 UAL rate | 2.56% | (1.82%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 8.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $42,494 | $0 | $42,494 |
| Tier 2 | 37,964 | 0 | 37,964 |
| Tier 1/Tier 2 valuation payroll | 80,458 | 0 | 80,458 |
| OPSRP valuation payroll | 14,330 | 0 | 14,330 |
| **Combined valuation payroll** | **$94,788** | **$0** | **$94,788** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 2 |
| **Grand Total Number of Members** | **8** | **1** | **1** | **10** | **8** | **1** | **0** | **9** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | 1 | | | | | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | 1 | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | | | **1** | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 2 | 256 |
| **60-64** | 1 | 381 |
| **65-69** | | |
| **70-74** | 1 | 23 |
| **75+** | | |
| **Total** | 4 | 229 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 491 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | 1 | 1,098 |
| **75-79** | 1 | 442 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 3 | 677 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Gearhart/2309
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Gearhart/2309

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On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

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Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Gearhart -- #2309

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Gearhart to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gearhart.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Gearhart*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 15.97% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (4.26%) | (4.26%) | (4.26%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.86%** | **2.16%** | **4.89%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.45%** | **2.65%** | **5.38%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 89%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.71% | 11.71% |
| Minimum July 1, 2015 Rate | 8.71% | 5.71% |
| Maximum July 1, 2015 Rate | 14.71% | 17.71% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 4 |
| Amortization factor | 17.175 | 4.045 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.71% | (6.91%) | (6.91%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.65% | 2.68% | 2.68% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,434,247 | $976,772 | ($457,475) | 147% | $410,869 | (111%) |
| 12/31/2007 | 1,608,557 | 991,482 | (617,075) | 162% | 336,530 | (183%) |
| 12/31/2008 | 1,171,373 | 1,096,661 | (74,712) | 107% | 381,660 | (20%) |
| 12/31/2009 | 1,341,751 | 1,213,117 | (128,634) | 111% | 436,516 | (29%) |
| 12/31/2010 | 1,485,727 | 1,457,065 | (28,662) | 102% | 423,943 | (7%) |
| 12/31/2011 | 1,434,130 | 1,606,043 | 171,913 | 89% | 386,443 | 44% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Gearhart*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $171,913 | ($28,662) |
| Allocated pooled OPSRP UAL | 6,594 | 5,264 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 178,507 | (23,398) |
| Combined valuation payroll | 386,443 | 423,943 |
| Net pension UAL as a percentage of payroll | 46% | (6%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $10,011 | $15,253 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $43,366 | $52,956 |
| Tier 1/Tier 2 valuation payroll | 271,508 | 350,420 |
| Tier 1/Tier 2 pension normal cost rate | 15.97% | 15.11% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,606,043 | $1,457,065 |
| Actuarial asset value | 1,434,130 | 1,485,727 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 171,913 | (28,662) |
| Tier 1/ Tier 2 Funded status | 89% | 102% |
| Combined valuation payroll | $386,443 | $423,943 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 44% | (7%) |
| Tier 1/Tier 2 UAL rate | (4.26%) | (3.40%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 4 | 5 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 386,443 | 423,943 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $94,523 | $148,227 |
| 2. Employer reserves | 979,380 | 1,117,293 |
| 3. Benefits in force reserve | 360,227 | 220,207 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$1,434,130** | **$1,485,727** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,485,727 |
| 2. | Regular employer contributions | 10,919 |
| 3. | Benefit payments and expenses | (60,353) |
| 4. | Adjustments[2] | (40,268) |
| 5. | Interest credited | 38,105 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,434,130** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $27,477 | $26,903 |
| Tier 1 General Service | 0 | 11,231 |
| Tier 2 Police & Fire | 12,751 | 12,367 |
| Tier 2 General Service | 3,138 | 2,455 |
| **Total** | **$43,366** | **$52,956** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $43,366 | $43,366 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $746,285 | $710,135 |
| ▪ Tier 1 General Service | 0 | 205,398 |
| ▪ Tier 2 Police & Fire | 156,915 | 138,323 |
| ▪ Tier 2 General Service | 47,686 | 40,627 |
| ▪ **Total Active Members** | **$950,886** | **$1,094,483** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 655,157 | 362,582 |
| **Total Actuarial Accrued Liability** | **$1,606,043** | **$1,457,065** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,606,043 | $1,606,043 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,606,043 | $1,457,065 |
| 2. Actuarial value of assets | 1,434,130 | 1,485,727 |
| 3. Unfunded accrued liability *(1. – 2.)* | 171,913 | (28,662) |
| 4. Funded percentage *(2. ÷ 1.)* | 89% | 102% |
| 5. Combined valuation payroll | $386,443 | $423,943 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 44% | (7%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($598,437) | ($49,318) | ($45,776) | ($594,895) | ($51,167) |
| December 31, 2009 | $472,779 | $36,115 | $36,285 | $472,949 | $37,469 |
| December 31, 2011 | N/A | N/A | N/A | $293,859 | $21,701 |
| **Total** | | | | **$171,913** | **$8,003** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,457,065 |
| b. Normal cost at December 31, 2010 | 52,956 |
| c. Benefit payments during 2011 | (59,958) |
| d. Interest at 8.0% to December 31, 2011 | 118,403 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,568,466 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,568,466 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,606,043 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (37,577) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,485,727 |
| b. Contributions for 2011[1] | 10,919 |
| c. Benefit payments and expenses during 2011 | (60,353) |
| d. Interest at 8.0% to December 31, 2011 | 116,881 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,553,173 |
| 5. Actuarial value of assets at December 31, 2011 | 1,434,130 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (119,043) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($156,620)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($28,662)** |
| 2. Expected increase | 43,955 |
| 3. Liability (gain)/loss | 37,577 |
| 4. Asset (gain)/loss | 119,043 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$171,913** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $27,477 | $154,390 | 17.80% | $26,903 | $153,864 | 17.48% |
| Tier 1 General Service | 0 | 0 | 0.00% | 11,231 | 84,358 | 13.31% |
| Tier 2 Police & Fire | 12,751 | 68,195 | 18.70% | 12,367 | 67,086 | 18.43% |
| Tier 2 General Service | 3,138 | 48,923 | 6.41% | 2,455 | 45,112 | 5.44% |
| **Total** | **$43,366** | **$271,508** | **15.97%** | **$52,956** | **$350,420** | **15.11%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $171,913 | ($28,662) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 8,003 | (6,040) |
| 3. Combined valuation payroll | 386,443 | 423,943 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.07% | (1.42%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 15.97% | 15.11% |
| b. Tier 1/Tier 2 UAL rate | 2.07% | (1.42%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 18.17% | 13.81% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 89% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 18.17% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (6.46%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.07% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (4.39%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.71% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 15.97% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 15.97% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 15.97% | 15.11% |
| b. Tier 1/Tier 2 UAL rate | (4.39%) | (3.52%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 11.71% | 11.71% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $154,390 | $154,390 |
| Tier 2 | 48,923 | 68,195 | 117,118 |
| Tier 1/Tier 2 valuation payroll | 48,923 | 222,585 | 271,508 |
| OPSRP valuation payroll | 75,768 | 39,167 | 114,935 |
| **Combined valuation payroll** | **$124,691** | **$261,752** | **$386,443** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 2 | 3 | 1 | 1 | 2 | 4 |
| Police & Fire | 2 | 1 | 1 | 4 | 2 | 1 | 0 | 3 |
| Total | 2 | 2 | 3 | 7 | 3 | 2 | 2 | 7 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **4** | **2** | **3** | **9** | **4** | **2** | **2** | **8** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 1 | | | | | | | **1** |
| **40-44** | | | | 1 | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | 1 | | | | **1** |
| **55-59** | | | 1 | | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **2** | **1** | | **1** | | | | **4** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 2 | 1,929 |
| **65-69** | | |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 2 | 1,929 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Gervais/2264
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Gervais/2264

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Gervais/2264

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Gervais -- #2264

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Gervais to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gervais.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Gervais*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.25% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.80% | 0.80% | 0.80% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.20%** | **7.22%** | **9.95%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.79%** | **7.71%** | **10.44%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 82%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.05% | 13.05% |
| Minimum July 1, 2015 Rate | 10.05% | 7.05% |
| Maximum July 1, 2015 Rate | 16.05% | 19.05% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.70% | 1.15% | 1.15% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.61% | 3.36% | 3.36% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $887,077 | $633,168 | ($253,909) | 140% | $321,993 | (79%) |
| 12/31/2007 | 963,839 | 724,739 | (239,100) | 133% | 256,878 | (93%) |
| 12/31/2008 | 739,278 | 786,181 | 46,903 | 94% | 347,867 | 13% |
| 12/31/2009 | 860,297 | 931,540 | 71,243 | 92% | 392,434 | 18% |
| 12/31/2010 | 908,919 | 1,046,214 | 137,295 | 87% | 365,611 | 38% |
| 12/31/2011 | 925,700 | 1,131,043 | 205,343 | 82% | 365,206 | 56% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Gervais*

| | **Actuarial Valuation as of** | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $205,343 | $137,295 |
| Allocated pooled OPSRP UAL | 6,231 | 4,540 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 211,574 | 141,835 |
| Combined valuation payroll | 365,206 | 365,611 |
| Net pension UAL as a percentage of payroll | 58% | 39% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $9,461 | $13,154 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $24,220 | $28,107 |
| Tier 1/Tier 2 valuation payroll | 197,773 | 238,898 |
| Tier 1/Tier 2 pension normal cost rate | 12.25% | 11.77% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,131,043 | $1,046,214 |
| Actuarial asset value | 925,700 | 908,919 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 205,343 | 137,295 |
| Tier 1/ Tier 2 Funded status | 82% | 87% |
| Combined valuation payroll | $365,206 | $365,611 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 56% | 38% |
| Tier 1/Tier 2 UAL rate | 0.80% | 1.28% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 4 | 5 |
| Tier 1/Tier 2 dormant members | 3 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 6 | 6 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 365,206 | 365,611 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $156,835 | $149,000 |
| 2. Employer reserves | 552,365 | 523,791 |
| 3. Benefits in force reserve | 216,500 | 236,128 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$925,700** | **$908,919** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $908,919 |
| 2. | Regular employer contributions | 16,812 |
| 3. | Benefit payments and expenses | (36,273) |
| 4. | Adjustments[2] | 10,091 |
| 5. | Interest credited | 26,151 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$925,700** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $9,650 | $9,117 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 6,249 |
| Tier 2 General Service | 14,570 | 12,741 |
| **Total** | **$24,220** | **$28,107** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $24,220 | $24,220 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $446,038 | $448,735 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 29,225 | 19,043 |
| ▪ Tier 2 General Service | 126,518 | 101,782 |
| ▪ **Total Active Members** | **$601,781** | **$569,560** |
| Dormant Members | 135,505 | 87,857 |
| Retired Members and Beneficiaries | 393,757 | 388,797 |
| **Total Actuarial Accrued Liability** | **$1,131,043** | **$1,046,214** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,131,043 | $1,131,043 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,131,043 | $1,046,214 |
| 2. Actuarial value of assets | 925,700 | 908,919 |
| 3. Unfunded accrued liability *(1. – 2.)* | 205,343 | 137,295 |
| 4. Funded percentage *(2. ÷ 1.)* | 82% | 87% |
| 5. Combined valuation payroll | $365,206 | $365,611 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 56% | 38% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($268,886) | ($22,159) | ($20,568) | ($267,295) | ($22,990) |
| December 31, 2009 | $341,854 | $26,114 | $26,237 | $341,977 | $27,093 |
| December 31, 2011 | N/A | N/A | N/A | $130,661 | $9,649 |
| **Total** | | | | **$205,343** | **$13,752** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,046,214 |
| b. Normal cost at December 31, 2010 | 28,107 |
| c. Benefit payments during 2011 | (36,035) |
| d. Interest at 8.0% to December 31, 2011 | 84,504 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,122,790 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,122,790 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,131,043 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (8,253) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 908,919 |
| b. Contributions for 2011[1] | 16,812 |
| c. Benefit payments and expenses during 2011 | (36,273) |
| d. Interest at 8.0% to December 31, 2011 | 71,935 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 961,393 |
| 5. Actuarial value of assets at December 31, 2011 | 925,700 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (35,693) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($43,946)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$137,295** |
| 2. Expected increase | 24,102 |
| 3. Liability (gain)/loss | 8,253 |
| 4. Asset (gain)/loss | 35,693 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$205,343** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $9,650 | $62,112 | 15.54% | $9,117 | $60,923 | 14.96% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 6,249 | 52,256 | 11.96% |
| Tier 2 General Service | 14,570 | 135,661 | 10.74% | 12,741 | 125,719 | 10.13% |
| **Total** | **$24,220** | **$197,773** | **12.25%** | **$28,107** | **$238,898** | **11.77%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $205,343 | $137,295 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 13,752 | 8,706 |
| 3. Combined valuation payroll | 365,206 | 365,611 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.77% | 2.38% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.25% | 11.77% |
| b. Tier 1/Tier 2 UAL rate | 3.77% | 2.38% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.15% | 14.27% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.05% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.05% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.01% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 82% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.05% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.05% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.15% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.10%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.77% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.67% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.05% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.25% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.25% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.05% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.25% | 11.77% |
| b. Tier 1/Tier 2 UAL rate | 0.67% | 1.16% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 13.05% | 13.05% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $62,112 | $62,112 |
| Tier 2 | 135,661 | 0 | 135,661 |
| Tier 1/Tier 2 valuation payroll | 135,661 | 62,112 | 197,773 |
| OPSRP valuation payroll | 98,489 | 68,944 | 167,433 |
| **Combined valuation payroll** | **$234,150** | **$131,056** | **$365,206** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 3 | 3 | 6 | 0 | 3 | 2 | 5 |
| Police & Fire | 1 | 0 | 2 | 3 | 1 | 1 | 1 | 3 |
| Total | 1 | 3 | 5 | 9 | 1 | 4 | 3 | 8 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 5 | 1 | N/A | 6 | 6 | 0 | N/A | 6 |
| Total | 5 | 1 | N/A | 6 | 6 | 0 | N/A | 6 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Police & Fire | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 |
| Total | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 1 | 0 | 5 | 4 | 1 | 0 | 5 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 5 | 1 | 0 | 6 | 5 | 1 | 0 | 6 |
| **Grand Total Number of Members** | **14** | **5** | **5** | **24** | **14** | **5** | **3** | **22** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | | | 1 | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | 1 | | | | | | | **1** |
| **55-59** | | 1 | | | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **2** | **1** | **1** | | | | | | **4** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 2 | 522 |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 597 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 3 | 547 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 925 |
| **55-59** | 2 | 478 |
| **60-64** | | |
| **65-69** | 1 | 172 |
| **70-74** | 1 | 413 |
| **75-79** | 1 | 98 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 6 | 427 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Gold Beach/2250
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Gold Beach/2250

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Gold Beach -- #2250

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Gold Beach to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gold Beach.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Gold Beach*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.69% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.59% | 4.59% | 4.59% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.43%** | **11.01%** | **13.74%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **18.02%** | **11.50%** | **14.23%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 84%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.28% | 17.28% |
| Minimum July 1, 2015 Rate | 13.82% | 10.36% |
| Maximum July 1, 2015 Rate | 20.74% | 24.20% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 19 | 23 |
| Amortization factor | 12.878 | 14.647 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.08% | 5.61% | 5.61% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.28% | 4.59% | 4.59% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $2,510,043 | $2,460,539 | ($49,504) | 102% | $468,598 | (11%) |
| 12/31/2007 | 2,640,725 | 2,573,049 | (67,676) | 103% | 468,729 | (14%) |
| 12/31/2008 | 2,042,171 | 2,715,082 | 672,911 | 75% | 553,062 | 122% |
| 12/31/2009 | 2,363,600 | 2,799,170 | 435,570 | 84% | 540,045 | 81% |
| 12/31/2010 | 2,416,858 | 2,808,705 | 391,847 | 86% | 665,234 | 59% |
| 12/31/2011 | 2,267,242 | 2,685,284 | 418,042 | 84% | 725,790 | 58% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Gold Beach*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $418,042 | $391,847 |
| Allocated pooled OPSRP UAL | 12,384 | 8,260 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 430,426 | 400,107 |
| Combined valuation payroll | 725,790 | 665,234 |
| Net pension UAL as a percentage of payroll | 59% | 60% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $18,802 | $23,934 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $51,905 | $39,282 |
| Tier 1/Tier 2 valuation payroll | 409,121 | 334,282 |
| Tier 1/Tier 2 pension normal cost rate | 12.69% | 11.75% |
| Tier 1/ Tier 2 Actuarial accrued liability | $2,685,284 | $2,808,705 |
| Actuarial asset value | 2,267,242 | 2,416,858 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 418,042 | 391,847 |
| Tier 1/ Tier 2 Funded status | 84% | 86% |
| Combined valuation payroll | $725,790 | $665,234 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 58% | 59% |
| Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10) | 4.59% | 4.52% |
| Tier 1/Tier 2 active members [1] | 8 | 8 |
| Tier 1/Tier 2 dormant members | 6 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 20 | 20 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 725,790 | 665,234 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $319,101 | $364,927 |
| 2. Employer reserves | 1,123,215 | 1,103,633 |
| 3. Benefits in force reserve | 824,926 | 948,297 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$2,267,242** | **$2,416,858** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $2,416,858 |
| 2. Regular employer contributions | 65,930 |
| 3. Benefit payments and expenses | (138,211) |
| 4. Adjustments[2] | (135,797) |
| 5. Interest credited | 58,462 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,267,242** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $11,303 | $8,700 |
| Tier 1 General Service | 12,668 | 7,678 |
| Tier 2 Police & Fire | 12,776 | 5,903 |
| Tier 2 General Service | 15,158 | 17,001 |
| **Total** | **$51,905** | **$39,282** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $51,905 | $51,905 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $315,065 | $264,607 |
| ▪ Tier 1 General Service | 204,589 | 173,125 |
| ▪ Tier 2 Police & Fire | 171,704 | 174,900 |
| ▪ Tier 2 General Service | 155,859 | 184,462 |
| ▪ **Total Active Members** | **$847,217** | **$797,094** |
| Dormant Members | 337,744 | 450,189 |
| Retired Members and Beneficiaries | 1,500,323 | 1,561,422 |
| **Total Actuarial Accrued Liability** | **$2,685,284** | **$2,808,705** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $2,685,284 | $2,685,284 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $2,685,284 | $2,808,705 |
| 2. Actuarial value of assets | 2,267,242 | 2,416,858 |
| 3. Unfunded accrued liability *(1. – 2.)* | 418,042 | 391,847 |
| 4. Funded percentage *(2. ÷ 1.)* | 84% | 86% |
| 5. Combined valuation payroll | $725,790 | $665,234 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 58% | 59% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($129,133) | ($10,642) | ($9,878) | ($128,369) | ($11,041) |
| December 31, 2009 | $566,738 | $43,293 | $43,496 | $566,941 | $44,916 |
| December 31, 2011 | N/A | N/A | N/A | ($20,530) | ($1,516) |
| **Total** | | | | **$418,042** | **$32,359** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $2,808,705 |
| b. Normal cost at December 31, 2010 | 39,282 |
| c. Benefit payments during 2011 | (137,305) |
| d. Interest at 8.0% to December 31, 2011 | 222,347 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 2,933,029 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 2,933,029 |
| 2. Actuarial accrued liability at December 31, 2011 | 2,685,284 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 247,745 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,416,858 |
| b. Contributions for 2011[1] | 65,930 |
| c. Benefit payments and expenses during 2011 | (138,211) |
| d. Interest at 8.0% to December 31, 2011 | 190,457 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,535,035 |
| 5. Actuarial value of assets at December 31, 2011 | 2,267,242 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (267,793) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($20,048)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$391,847** |
| 2. Expected increase | 6,147 |
| 3. Liability (gain)/loss | (247,745) |
| 4. Asset (gain)/loss | 267,793 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$418,042** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $11,303 | $60,233 | 18.77% | $8,700 | $52,607 | 16.54% |
| Tier 1 General Service | 12,668 | 117,104 | 10.82% | 7,678 | 81,642 | 9.40% |
| Tier 2 Police & Fire | 12,776 | 94,375 | 13.54% | 5,903 | 46,685 | 12.64% |
| Tier 2 General Service | 15,158 | 137,409 | 11.03% | 17,001 | 153,348 | 11.09% |
| **Total** | **$51,905** | **$409,121** | **12.69%** | **$39,282** | **$334,282** | **11.75%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $418,042 | $391,847 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 32,359 | 29,272 |
| 3. Combined valuation payroll | 725,790 | 665,234 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.46% | 4.40% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.69% | 11.75% |
| b. Tier 1/Tier 2 UAL rate | 4.46% | 4.40% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.28% | 16.27% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 16.08% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 16.08% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.22% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.22% |
| c. Funded percentage | 84% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.22% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 12.86% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.30% |
| 7. July 1, 2013 total pension rate, before adjustment | 17.28% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.46% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.46% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.28% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.69% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.69% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.28% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.69% | 11.75% |
| b. Tier 1/Tier 2 UAL rate | 4.46% | 4.40% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 17.28% | 16.27% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $117,104 | $60,233 | $177,337 |
| Tier 2 | 137,409 | 94,375 | 231,784 |
| Tier 1/Tier 2 valuation payroll | 254,513 | 154,608 | 409,121 |
| OPSRP valuation payroll | 245,686 | 70,983 | 316,669 |
| **Combined valuation payroll** | **$500,199** | **$225,591** | **$725,790** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 3 | 7 | 12 | 2 | 4 | 6 | 12 |
| Police & Fire | 1 | 2 | 2 | 5 | 1 | 1 | 3 | 5 |
| Total | 3 | 5 | 9 | 17 | 3 | 5 | 9 | 17 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 2 | 0 | N/A | 2 | 2 | 0 | N/A | 2 |
| Police & Fire | 1 | 2 | N/A | 3 | 1 | 3 | N/A | 4 |
| Total | 3 | 2 | N/A | 5 | 3 | 3 | N/A | 6 |
| **Dormant Members** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 |
| Police & Fire | 1 | 2 | 1 | 4 | 3 | 2 | 0 | 5 |
| Total | 4 | 2 | 1 | 7 | 4 | 2 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 7 | 0 | 0 | 7 | 8 | 0 | 0 | 8 |
| Police & Fire | 13 | 0 | 0 | 13 | 11 | 1 | 0 | 12 |
| Total | 20 | 0 | 0 | 20 | 19 | 1 | 0 | 20 |
| **Grand Total Number of Members** | **30** | **9** | **10** | **49** | **29** | **11** | **9** | **49** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | 1 | | | | | | | | 1 |
| 40-44 | | 1 | | 1 | 1 | | | | | 3 |
| 45-49 | | | 1 | | 1 | | | | | 2 |
| 50-54 | | | 2 | | | | | | | 2 |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **2** | **3** | **1** | **2** | | | | | **8** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | 1 | 3,637 |
| 50-54 | 2 | 97 |
| 55-59 | 2 | 83 |
| 60-64 | 1 | 110 |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 6 | 684 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 4 | 639 |
| 60-64 | 3 | 386 |
| 65-69 | 3 | 752 |
| 70-74 | 8 | 488 |
| 75-79 | 2 | 506 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 20 | 544 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Grants Pass/2113
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Grants Pass/2113

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

City of Grants Pass -- #2113

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Grants Pass to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Grants Pass.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Grants Pass*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 12.39% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 8.83% | 8.83% | 8.83% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **21.37%** | **15.25%** | **17.98%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **21.96%** | **15.74%** | **18.47%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 77%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 21.22% | 21.22% |
| Minimum July 1, 2015 Rate | 16.98% | 12.74% |
| Maximum July 1, 2015 Rate | 25.46% | 29.70% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 30 |
| Amortization factor | 12.698 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.92% | 6.38% | 6.38% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 21.22% | 8.83% | 8.83% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $49,659,256 | $52,405,179 | $2,745,923 | 95% | $10,403,078 | 26% |
| 12/31/2007 | 52,711,473 | 54,238,486 | 1,527,013 | 97% | 11,433,157 | 13% |
| 12/31/2008 | 39,663,782 | 56,472,774 | 16,808,992 | 70% | 12,515,625 | 134% |
| 12/31/2009 | 45,516,785 | 58,455,182 | 12,938,397 | 78% | 11,981,543 | 108% |
| 12/31/2010 | 49,311,239 | 61,438,085 | 12,126,846 | 80% | 12,714,676 | 95% |
| 12/31/2011 | 48,845,349 | 63,743,090 | 14,897,741 | 77% | 13,468,530 | 111% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Grants Pass*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $14,897,741 | $12,126,846 |
| Allocated pooled OPSRP UAL | 229,805 | 157,868 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 15,127,546 | 12,284,714 |
| Combined valuation payroll | 13,468,530 | 12,714,676 |
| Net pension UAL as a percentage of payroll | 112% | 97% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $348,909 | $457,454 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $1,096,815 | $1,018,367 |
| Tier 1/Tier 2 valuation payroll | 8,849,174 | 8,677,452 |
| Tier 1/Tier 2 pension normal cost rate | 12.39% | 11.74% |
| Tier 1/ Tier 2 Actuarial accrued liability | $63,743,090 | $61,438,085 |
| Actuarial asset value | 48,845,349 | 49,311,239 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 14,897,741 | 12,126,846 |
| Tier 1/ Tier 2 Funded status | 77% | 80% |
| Combined valuation payroll | $13,468,530 | $12,714,676 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 111% | 95% |
| Tier 1/Tier 2 UAL rate | 8.83% | 7.43% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 123 | 128 |
| Tier 1/Tier 2 dormant members | 32 | 36 |
| Tier 1/Tier 2 retirees and beneficiaries | 143 | 148 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| ($ in millions) | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| ($ in millions) RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 13,468,530 | 12,714,676 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $9,109,728 | $9,058,387 |
| 2. Employer reserves | 22,157,209 | 21,009,944 |
| 3. Benefits in force reserve | 17,578,411 | 19,242,908 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$48,845,349** | **$49,311,239** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $49,311,239 |
| 2. | Regular employer contributions | 1,466,831 |
| 3. | Benefit payments and expenses | (2,945,142) |
| 4. | Adjustments[2] | (397,282) |
| 5. | Interest credited | 1,409,702 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$48,845,349** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $461,663 | $417,832 |
| Tier 1 General Service | 93,067 | 71,156 |
| Tier 2 Police & Fire | 282,132 | 274,067 |
| Tier 2 General Service | 259,953 | 255,312 |
| **Total** | **$1,096,815** | **$1,018,367** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $1,096,815 | $1,096,815 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $12,401,036 | $10,985,284 |
| ▪ Tier 1 General Service | 9,573,410 | 8,506,168 |
| ▪ Tier 2 Police & Fire | 3,363,141 | 2,862,354 |
| ▪ Tier 2 General Service | 3,231,036 | 3,025,238 |
| ▪ **Total Active Members** | **$28,568,623** | **$25,379,044** |
| Dormant Members | 3,203,975 | 4,374,585 |
| Retired Members and Beneficiaries | 31,970,492 | 31,684,456 |
| **Total Actuarial Accrued Liability** | **$63,743,090** | **$61,438,085** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $63,743,090 | $63,743,090 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $63,743,090 | $61,438,085 |
| 2. Actuarial value of assets | 48,845,349 | 49,311,239 |
| 3. Unfunded accrued liability *(1. – 2.)* | 14,897,741 | 12,126,846 |
| 4. Funded percentage *(2. ÷ 1.)* | 77% | 80% |
| 5. Combined valuation payroll | $13,468,530 | $12,714,676 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 111% | 95% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $198,389 | $16,350 | $15,175 | $197,214 | $16,963 |
| December 31, 2009 | $12,777,793 | $976,089 | $980,673 | $12,782,377 | $1,012,692 |
| December 31, 2011 | N/A | N/A | N/A | $1,918,150 | $141,655 |
| **Total** | | | | **$14,897,741** | **$1,171,310** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $61,438,085 |
| b. Normal cost at December 31, 2010 | 1,018,367 |
| c. Benefit payments during 2011 | (2,925,837) |
| d. Interest at 8.0% to December 31, 2011 | 4,879,483 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 64,410,098 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 64,410,098 |
| 2. Actuarial accrued liability at December 31, 2011 | 63,743,090 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 667,008 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 49,311,239 |
| b. Contributions for 2011[1] | 1,466,831 |
| c. Benefit payments and expenses during 2011 | (2,945,142) |
| d. Interest at 8.0% to December 31, 2011 | 3,885,767 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 51,718,695 |
| 5. Actuarial value of assets at December 31, 2011 | 48,845,349 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (2,873,347) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($2,206,339)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$12,126,846** |
| 2. Expected increase | 564,556 |
| 3. Liability (gain)/loss | (667,008) |
| 4. Asset (gain)/loss | 2,873,347 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$14,897,741** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $461,663 | $2,423,085 | 19.05% | $417,832 | $2,304,940 | 18.13% |
| Tier 1 General Service | 93,067 | 1,852,280 | 5.02% | 71,156 | 1,751,872 | 4.06% |
| Tier 2 Police & Fire | 282,132 | 2,000,786 | 14.10% | 274,067 | 2,031,537 | 13.49% |
| Tier 2 General Service | 259,953 | 2,573,023 | 10.10% | 255,312 | 2,589,103 | 9.86% |
| **Total** | **$1,096,815** | **$8,849,174** | **12.39%** | **$1,018,367** | **$8,677,452** | **11.74%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $14,897,741 | $12,126,846 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 1,171,310 | 929,716 |
| 3. Combined valuation payroll | 13,468,530 | 12,714,676 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.70% | 7.31% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.39% | 11.74% |
| b. Tier 1/Tier 2 UAL rate | 8.70% | 7.31% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 21.22% | 19.17% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 16.91% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 16.91% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 3.38% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.38% |
| | c. Funded percentage | 77% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.39% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 12.52% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 21.30% |
| 7. | July 1, 2013 total pension rate, before adjustment | 21.22% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.70% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 8.70% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 21.22% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.39% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.39% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 21.22% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.39% | 11.74% |
| b. Tier 1/Tier 2 UAL rate | 8.70% | 7.31% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 21.22% | 19.17% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,852,280 | $2,423,085 | $4,275,365 |
| Tier 2 | 2,573,023 | 2,000,786 | 4,573,809 |
| Tier 1/Tier 2 valuation payroll | 4,425,303 | 4,423,871 | 8,849,174 |
| OPSRP valuation payroll | 2,698,059 | 1,921,297 | 4,619,356 |
| **Combined valuation payroll** | **$7,123,362** | **$6,345,168** | **$13,468,530** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 29 | 46 | 56 | 131 | 29 | 49 | 54 | 132 |
| Police & Fire | 26 | 22 | 25 | 73 | 26 | 24 | 26 | 76 |
| Total | 55 | 68 | 81 | 204 | 55 | 73 | 80 | 208 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 21 | 9 | N/A | 30 | 23 | 11 | N/A | 34 |
| Police & Fire | 16 | 13 | N/A | 29 | 17 | 11 | N/A | 28 |
| Total | 37 | 22 | N/A | 59 | 40 | 22 | N/A | 62 |
| **Dormant Members** | | | | | | | | |
| General Service | 13 | 11 | 3 | 27 | 14 | 13 | 1 | 28 |
| Police & Fire | 6 | 2 | 0 | 8 | 7 | 2 | 0 | 9 |
| Total | 19 | 13 | 3 | 35 | 21 | 15 | 1 | 37 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 79 | 10 | 0 | 89 | 87 | 5 | 0 | 92 |
| Police & Fire | 54 | 0 | 0 | 54 | 56 | 0 | 0 | 56 |
| Total | 133 | 10 | 0 | 143 | 143 | 5 | 0 | 148 |
| **Grand Total Number of Members** | **244** | **113** | **84** | **441** | **259** | **115** | **81** | **455** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | 1 | | | | | | | | **1** |
| **30-34** | | 4 | 7 | | | | | | | **11** |
| **35-39** | | 6 | 10 | | | | | | | **16** |
| **40-44** | | | 9 | 10 | | | | | | **19** |
| **45-49** | | 5 | 5 | 7 | 7 | 1 | | | | **25** |
| **50-54** | | 2 | 5 | 6 | 5 | 2 | | | | **20** |
| **55-59** | | 1 | 8 | 3 | 5 | 2 | | 1 | | **20** |
| **60-64** | | 2 | 3 | 1 | 1 | 2 | 1 | | | **10** |
| **65-69** | | | | | 1 | | | | | **1** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **21** | **47** | **27** | **19** | **7** | **1** | **1** | | **123** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 1 | 1,187 |
| **35-39** | 1 | |
| **40-44** | 11 | 1,210 |
| **45-49** | 3 | 523 |
| **50-54** | 11 | 1,288 |
| **55-59** | 3 | 3,290 |
| **60-64** | 1 | 1,118 |
| **65-69** | 1 | 328 |
| **70-74** | | |
| **75+** | | |
| **Total** | 32 | 1,298 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | 1 | 912 |
| **50-54** | 7 | 1,774 |
| **55-59** | 10 | 1,676 |
| **60-64** | 31 | 1,962 |
| **65-69** | 32 | 1,897 |
| **70-74** | 22 | 1,538 |
| **75-79** | 17 | 1,295 |
| **80-84** | 14 | 866 |
| **85-89** | 3 | 353 |
| **90-94** | 5 | 373 |
| **95-99** | 1 | 628 |
| **100+** | | |
| **Total** | 143 | 1,560 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Gresham/2114
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Gresham/2114

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Gresham/2114

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Gresham -- #2114

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Gresham to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Gresham.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Gresham*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.07% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.63% | 2.63% | 2.63% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | (3.52%) | (3.52%) | (3.52%) |
| **Net pension contribution rate** | **11.33%** | **5.53%** | **8.26%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **11.92%** | **6.02%** | **8.75%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 81%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.70% | 14.70% |
| Minimum July 1, 2015 Rate | 11.70% | 8.70% |
| Maximum July 1, 2015 Rate | 17.70% | 20.70% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.75% | 1.36% | 1.36% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.22% | 3.15% | 3.15% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $208,078,421 | $171,825,638 | ($36,252,783) | 121% | $35,001,977 | (104%) |
| 12/31/2007 | 223,854,441 | 180,919,700 | (42,934,741) | 124% | 36,892,332 | (116%) |
| 12/31/2008 | 168,862,078 | 190,868,772 | 22,006,694 | 88% | 37,629,676 | 58% |
| 12/31/2009 | 189,958,934 | 203,674,858 | 13,715,925 | 93% | 37,704,039 | 36% |
| 12/31/2010 | 201,010,560 | 214,467,396 | 13,456,836 | 94% | 39,906,096 | 34% |
| 12/31/2011 | 198,059,438 | 225,555,045 | 27,495,606 | 88% | 38,944,096 | 71% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Gresham*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $43,447,228 | $30,532,416 |
| Allocated pooled OPSRP UAL | 664,479 | 495,484 |
| Side account | 15,951,622 | 17,075,580 |
| Net unfunded pension actuarial accrued liability | 28,160,085 | 13,952,320 |
| Combined valuation payroll | 38,944,096 | 39,906,096 |
| Net pension UAL as a percentage of payroll | 72% | 35% |
| Calculated side account rate relief | (3.52%) | (3.53%) |
| Allocated pooled RHIA UAL | $1,008,866 | $1,435,758 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $3,302,808 | $3,329,260 |
| Tier 1/Tier 2 valuation payroll | 27,373,708 | 29,118,399 |
| Tier 1/Tier 2 pension normal cost rate | 12.07% | 11.43% |
| Tier 1/ Tier 2 Actuarial accrued liability | $225,555,045 | $214,467,396 |
| Actuarial asset value | 182,107,817 | 183,934,980 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 43,447,228 | 30,532,416 |
| Tier 1/ Tier 2 Funded status | 81% | 86% |
| Combined valuation payroll | $38,944,096 | $39,906,096 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 112% | 77% |
| Tier 1/Tier 2 UAL rate | 2.63% | 3.27% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 330 | 360 |
| Tier 1/Tier 2 dormant members | 115 | 110 |
| Tier 1/Tier 2 retirees and beneficiaries | 352 | 323 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | **$17,075,580** | **$17,075,580** |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | (1,000) | (1,000) |
| 4. Amount transferred to employer reserves during 2011 | | (1,580,674) | (1,580,674) |
| 5. Side account earnings during 2011 | | 457,716 | 457,716 |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | **$15,951,622** | **$15,951,622** |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $15,951,622 | $17,075,580 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$15,951,622** | **$17,075,580** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $15,951,622 | $17,075,580 |
| 2. Combined valuation payroll | 38,944,096 | 39,906,096 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | (3.52%) | (3.53%) |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $32,244,516 | $33,825,666 |
| 2. Employer reserves | 86,160,808 | 86,171,334 |
| 3. Benefits in force reserve | 63,702,493 | 63,937,981 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$182,107,817** | **$183,934,980** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $183,934,980 |
| 2. | Regular employer contributions | 1,196,678 |
| 3. | Benefit payments and expenses | (10,672,913) |
| 4. | Adjustments[2] | 954,574 |
| 5. | Interest credited | 5,113,824 |
| 6. | Total transferred from side accounts | 1,580,674 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$182,107,817** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $1,446,559 | $1,473,391 |
| Tier 1 General Service | 405,771 | 446,802 |
| Tier 2 Police & Fire | 793,794 | 767,058 |
| Tier 2 General Service | 656,684 | 642,009 |
| **Total** | **$3,302,808** | **$3,329,260** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $3,302,808 | $3,302,808 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $46,639,690 | $45,966,579 |
| ▪ Tier 1 General Service | 28,994,495 | 32,461,290 |
| ▪ Tier 2 Police & Fire | 9,757,589 | 8,618,546 |
| ▪ Tier 2 General Service | 9,141,940 | 8,214,852 |
| ▪ **Total Active Members** | **$94,533,714** | **$95,261,267** |
| Dormant Members | 15,163,306 | 13,928,896 |
| Retired Members and Beneficiaries | 115,858,025 | 105,277,233 |
| **Total Actuarial Accrued Liability** | **$225,555,045** | **$214,467,396** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $225,555,045 | $225,555,045 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $225,555,045 | $214,467,396 |
| 2. Actuarial value of assets | 182,107,817 | 183,934,980 |
| 3. Unfunded accrued liability *(1. – 2.)* | 43,447,228 | 30,532,416 |
| 4. Funded percentage *(2. ÷ 1.)* | 81% | 86% |
| 5. Combined valuation payroll | $38,944,096 | $39,906,096 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 112% | 77% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($23,739,373) | ($1,956,380) | ($1,815,870) | ($23,598,863) | ($2,029,744) |
| December 31, 2009 | $54,486,678 | $4,162,209 | $4,181,756 | $54,506,225 | $4,318,292 |
| December 31, 2011 | N/A | N/A | N/A | $12,539,866 | $926,066 |
| **Total** | | | | **$43,447,228** | **$3,214,614** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $214,467,396 |
| b. Normal cost at December 31, 2010 | 3,329,260 |
| c. Benefit payments during 2011 | (10,602,956) |
| d. Interest at 8.0% to December 31, 2011 | 16,999,614 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 224,193,314 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 224,193,314 |
| 2. Actuarial accrued liability at December 31, 2011 | 225,555,045 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (1,361,731) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 183,934,980 |
| b. Contributions for 2011[1] | 2,777,352 |
| c. Benefit payments and expenses during 2011 | (10,672,913) |
| d. Interest at 8.0% to December 31, 2011 | 14,398,976 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 190,438,395 |
| 5. Actuarial value of assets at December 31, 2011 | 182,107,817 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (8,330,578) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($9,692,309)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$30,532,416** |
| 2. Expected increase | 3,222,503 |
| 3. Liability (gain)/loss | 1,361,731 |
| 4. Asset (gain)/loss | 8,330,578 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$43,447,228** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $1,446,559 | $8,763,227 | 16.51% | $1,473,391 | $9,218,693 | 15.98% |
| Tier 1 General Service | 405,771 | 6,878,776 | 5.90% | 446,802 | 7,940,505 | 5.63% |
| Tier 2 Police & Fire | 793,794 | 5,453,370 | 14.56% | 767,058 | 5,486,207 | 13.98% |
| Tier 2 General Service | 656,684 | 6,278,335 | 10.46% | 642,009 | 6,472,994 | 9.92% |
| **Total** | **$3,302,808** | **$27,373,708** | **12.07%** | **$3,329,260** | **$29,118,399** | **11.43%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $43,447,228 | $30,532,416 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 3,214,614 | 2,189,959 |
| 3. Combined valuation payroll | 38,944,096 | 39,906,096 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.25% | 5.49% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.07% | 11.43% |
| b. Tier 1/Tier 2 UAL rate | 8.25% | 5.49% |
| c. Multnomah Fire District #10 rate | 0.26% | 0.24% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 20.58% | 17.16% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.17% |
| 2. Employer contribution rate attributable to side accounts | (3.53%) |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 11.70% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.34% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 81% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.70% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.70% |
| 7. July 1, 2013 total pension rate, before adjustment | 20.58% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (5.88%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.25% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.37% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.70% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.07% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.07% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.70% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.07% | 11.43% |
| b. Tier 1/Tier 2 UAL rate | 2.37% | 3.03% |
| c. Multnomah Fire District #10 rate | 0.26% | 0.24% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.70% | 14.70% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $6,878,776 | $8,763,227 | $15,642,003 |
| Tier 2 | 6,278,335 | 5,453,370 | 11,731,705 |
| Tier 1/Tier 2 valuation payroll | 13,157,111 | 14,216,597 | 27,373,708 |
| OPSRP valuation payroll | 7,128,053 | 4,442,335 | 11,570,388 |
| **Combined valuation payroll** | **$20,285,164** | **$18,658,932** | **$38,944,096** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 96 | 92 | 118 | 306 | 111 | 97 | 119 | 327 |
| Police & Fire | 84 | 58 | 57 | 199 | 92 | 60 | 54 | 206 |
| Total | 180 | 150 | 175 | 505 | 203 | 157 | 173 | 533 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 50 | 44 | N/A | 94 | 60 | 43 | N/A | 103 |
| Police & Fire | 16 | 14 | N/A | 30 | 16 | 14 | N/A | 30 |
| Total | 66 | 58 | N/A | 124 | 76 | 57 | N/A | 133 |
| **Dormant Members** | | | | | | | | |
| General Service | 61 | 31 | 5 | 97 | 64 | 35 | 4 | 103 |
| Police & Fire | 15 | 8 | 1 | 24 | 8 | 3 | 1 | 12 |
| Total | 76 | 39 | 6 | 121 | 72 | 38 | 5 | 115 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 213 | 16 | 0 | 229 | 193 | 13 | 0 | 206 |
| Police & Fire | 111 | 12 | 0 | 123 | 112 | 5 | 0 | 117 |
| Total | 324 | 28 | 0 | 352 | 305 | 18 | 0 | 323 |
| **Grand Total Number of Members** | **646** | **275** | **181** | **1,102** | **656** | **270** | **178** | **1,104** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | 1 | 4 | 5 | | | | | | | 10 |
| 35-39 | | 8 | 31 | 4 | | | | | | 43 |
| 40-44 | | 7 | 27 | 11 | | | | | | 45 |
| 45-49 | | 4 | 20 | 20 | 18 | 7 | | | | 69 |
| 50-54 | | 3 | 10 | 15 | 21 | 18 | 4 | | | 71 |
| 55-59 | | 5 | 13 | 13 | 16 | 3 | 3 | 1 | | 54 |
| 60-64 | | 2 | 8 | 8 | 10 | 4 | 2 | | | 34 |
| 65-69 | | | 2 | 1 | | 1 | | | | 4 |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | 1 | 33 | 116 | 72 | 65 | 33 | 9 | 1 | | 330 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 2 | 1,244 |
| 35-39 | 11 | 630 |
| 40-44 | 15 | 681 |
| 45-49 | 19 | 2,302 |
| 50-54 | 24 | 1,730 |
| 55-59 | 27 | 1,221 |
| 60-64 | 13 | 1,324 |
| 65-69 | 2 | 339 |
| 70-74 | 2 | 876 |
| 75+ | | |
| Total | 115 | 1,369 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 2 | 2,454 |
| 45-49 | 2 | 467 |
| 50-54 | 15 | 3,016 |
| 55-59 | 61 | 2,551 |
| 60-64 | 104 | 2,329 |
| 65-69 | 78 | 2,298 |
| 70-74 | 48 | 1,623 |
| 75-79 | 22 | 1,433 |
| 80-84 | 11 | 1,140 |
| 85-89 | 5 | 1,323 |
| 90-94 | 2 | 428 |
| 95-99 | 2 | 533 |
| 100+ | | |
| Total | 352 | 2,155 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Helix/2210
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Helix/2210

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,


Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary


**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Helix -- #2210

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Helix to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Helix.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Helix*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 11.20% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (1.55%) | (1.55%) | (1.55%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **9.80%** | **4.87%** | **7.60%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.39%** | **5.36%** | **8.09%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 104%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 9.65% | 9.65% |
| Minimum July 1, 2015 Rate | 6.65% | 3.65% |
| Maximum July 1, 2015 Rate | 12.65% | 15.65% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 6 | 12 |
| Amortization factor | 5.486 | 9.112 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.39% | (2.16%) | (2.16%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.65% | (1.55%) | (1.55%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $101,536 | $63,704 | ($37,832) | 159% | $28,706 | (132%) |
| 12/31/2007 | 108,854 | 67,930 | (40,924) | 160% | 30,075 | (136%) |
| 12/31/2008 | 76,476 | 76,151 | (325) | 100% | 31,023 | (1%) |
| 12/31/2009 | 88,754 | 81,883 | (6,871) | 108% | 32,415 | (21%) |
| 12/31/2010 | 97,418 | 87,836 | (9,582) | 111% | 33,907 | (28%) |
| 12/31/2011 | 98,078 | 94,599 | (3,479) | 104% | 34,741 | (10%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Helix*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($3,479) | ($9,582) |
| Allocated pooled OPSRP UAL | 593 | 421 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (2,886) | (9,161) |
| Combined valuation payroll | 34,741 | 33,907 |
| Net pension UAL as a percentage of payroll | (8%) | (27%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $900 | $1,220 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $3,891 | $3,664 |
| Tier 1/Tier 2 valuation payroll | 34,741 | 33,907 |
| Tier 1/Tier 2 pension normal cost rate | 11.20% | 10.81% |
| Tier 1/ Tier 2 Actuarial accrued liability | $94,599 | $87,836 |
| Actuarial asset value | 98,078 | 97,418 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (3,479) | (9,582) |
| Tier 1/ Tier 2 Funded status | 104% | 111% |
| Combined valuation payroll | $34,741 | $33,907 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (10%) | (28%) |
| Tier 1/Tier 2 UAL rate | (1.55%) | (2.78%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 2 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 34,741 | 33,907 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $256 | $248 |
| 2. Employer reserves | 63,912 | 60,280 |
| 3. Benefits in force reserve | 33,911 | 36,890 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$98,078** | **$97,418** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $97,418 |
| 2. | Regular employer contributions | 2,258 |
| 3. | Benefit payments and expenses | (5,681) |
| 4. | Adjustments [2] | 1,998 |
| 5. | Interest credited | 2,086 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$98,078** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 3,891 | 3,664 |
| **Total** | **$3,891** | **$3,664** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $3,891 | $3,891 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 32,925 | 27,095 |
| ▪ **Total Active Members** | **$32,925** | **$27,095** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 61,674 | 60,741 |
| **Total Actuarial Accrued Liability** | **$94,599** | **$87,836** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $94,599 | $94,599 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $94,599 | $87,836 |
| 2. Actuarial value of assets | 98,078 | 97,418 |
| 3. Unfunded accrued liability *(1. – 2.)* | (3,479) | (9,582) |
| 4. Funded percentage *(2. ÷ 1.)* | 104% | 111% |
| 5. Combined valuation payroll | $34,741 | $33,907 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (10%) | (28%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($43,104) | ($3,552) | ($3,297) | ($42,849) | ($3,685) |
| December 31, 2009 | $36,454 | $2,785 | $2,798 | $36,467 | $2,889 |
| December 31, 2011 | N/A | N/A | N/A | $2,903 | $214 |
| **Total** | | | | **($3,479)** | **($582)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $87,836 |
| b. Normal cost at December 31, 2010 | 3,664 |
| c. Benefit payments during 2011 | (5,644) |
| d. Interest at 8.0% to December 31, 2011 | 7,094 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 92,950 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 92,950 |
| 2. Actuarial accrued liability at December 31, 2011 | 94,599 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (1,649) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 97,418 |
| b. Contributions for 2011[1] | 2,258 |
| c. Benefit payments and expenses during 2011 | (5,681) |
| d. Interest at 8.0% to December 31, 2011 | 7,656 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 101,651 |
| 5. Actuarial value of assets at December 31, 2011 | 98,078 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (3,573) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($5,222)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($9,582)** |
| 2. Expected increase | 881 |
| 3. Liability (gain)/loss | 1,649 |
| 4. Asset (gain)/loss | 3,573 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($3,479)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 3,891 | 34,741 | 11.20% | 3,664 | 33,907 | 10.81% |
| **Total** | **$3,891** | **$34,741** | **11.20%** | **$3,664** | **$33,907** | **10.81%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($3,479) | ($9,582) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (582) | (984) |
| 3. Combined valuation payroll | 34,741 | 33,907 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.68%) | (2.90%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.20% | 10.81% |
| b. Tier 1/Tier 2 UAL rate | (1.68%) | (2.90%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 9.65% | 8.03% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 8.39% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.39% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.68% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 104% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.39% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.39% |
| 7. | July 1, 2013 total pension rate, before adjustment | 9.65% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.68%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.68%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 9.65% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 11.20% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 11.20% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 9.65% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.20% | 10.81% |
| b. Tier 1/Tier 2 UAL rate | (1.68%) | (2.90%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 9.65% | 8.03% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 34,741 | 0 | 34,741 |
| Tier 1/Tier 2 valuation payroll | 34,741 | 0 | 34,741 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$34,741** | **$0** | **$34,741** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| **Grand Total Number of Members** | **2** | **1** | **0** | **3** | **2** | **1** | **0** | **3** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | 1 | | | | | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **1** | | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | 2 | 182 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 2 | 182 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Hillsboro/2115
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Hillsboro/2115

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Hillsboro -- #2115

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Hillsboro to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Hillsboro.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Hillsboro*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.96% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 3.91% | 3.91% | 3.91% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **15.02%** | **10.33%** | **13.06%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.61%** | **10.82%** | **13.55%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 80%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.87% | 14.87% |
| Minimum July 1, 2015 Rate | 11.87% | 8.87% |
| Maximum July 1, 2015 Rate | 17.87% | 20.87% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 29 | 30 |
| Amortization factor | 16.967 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.38% | 3.08% | 3.08% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.87% | 3.91% | 3.91% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $128,045,683 | $120,985,439 | ($7,060,244) | 106% | $36,284,585 | (19%) |
| 12/31/2007 | 138,900,828 | 129,007,645 | (9,893,183) | 108% | 39,252,608 | (25%) |
| 12/31/2008 | 106,241,074 | 134,764,925 | 28,523,851 | 79% | 42,692,804 | 67% |
| 12/31/2009 | 122,679,132 | 145,509,269 | 22,830,137 | 84% | 44,456,632 | 51% |
| 12/31/2010 | 132,782,298 | 155,805,361 | 23,023,063 | 85% | 47,678,323 | 48% |
| 12/31/2011 | 131,672,972 | 163,806,911 | 32,133,939 | 80% | 49,565,888 | 65% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Hillsboro*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $32,133,939 | $23,023,063 |
| Allocated pooled OPSRP UAL | 845,712 | 591,985 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 32,979,651 | 23,615,048 |
| Combined valuation payroll | 49,565,888 | 47,678,323 |
| Net pension UAL as a percentage of payroll | 67% | 50% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,284,029 | $1,715,391 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $3,534,261 | $3,388,691 |
| Tier 1/Tier 2 valuation payroll | 32,238,022 | 32,429,333 |
| Tier 1/Tier 2 pension normal cost rate | 10.96% | 10.45% |
| Tier 1/ Tier 2 Actuarial accrued liability | $163,806,911 | $155,805,361 |
| Actuarial asset value | 131,672,972 | 132,782,298 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 32,133,939 | 23,023,063 |
| Tier 1/ Tier 2 Funded status | 80% | 85% |
| Combined valuation payroll | $49,565,888 | $47,678,323 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 65% | 48% |
| Tier 1/Tier 2 UAL rate | 3.91% | 3.64% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 414 | 426 |
| Tier 1/Tier 2 dormant members | 123 | 117 |
| Tier 1/Tier 2 retirees and beneficiaries | 278 | 245 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 49,565,888 | 47,678,323 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $22,741,754 | $24,963,590 |
| 2. Employer reserves | 64,381,713 | 64,246,260 |
| 3. Benefits in force reserve | 44,549,505 | 43,572,447 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$131,672,972** | **$132,782,298** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $132,782,298 |
| 2. | Regular employer contributions | 3,438,707 |
| 3. | Benefit payments and expenses | (7,463,962) |
| 4. | Adjustments[2] | (752,852) |
| 5. | Interest credited | 3,668,782 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$131,672,972** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $863,955 | $887,933 |
| Tier 1 General Service | 511,602 | 477,447 |
| Tier 2 Police & Fire | 1,122,356 | 1,058,231 |
| Tier 2 General Service | 1,036,348 | 965,080 |
| **Total** | **$3,534,261** | **$3,388,691** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $3,534,261 | $3,534,261 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $23,013,409 | $25,060,725 |
| ▪ Tier 1 General Service | 26,772,673 | 25,529,755 |
| ▪ Tier 2 Police & Fire | 12,318,416 | 10,514,997 |
| ▪ Tier 2 General Service | 13,867,308 | 12,291,228 |
| ▪ **Total Active Members** | **$75,971,806** | **$73,396,705** |
| Dormant Members | 6,811,309 | 10,664,340 |
| Retired Members and Beneficiaries | 81,023,796 | 71,744,316 |
| **Total Actuarial Accrued Liability** | **$163,806,911** | **$155,805,361** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $163,806,911 | $163,806,911 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $163,806,911 | $155,805,361 |
| 2. Actuarial value of assets | 131,672,972 | 132,782,298 |
| 3. Unfunded accrued liability *(1. – 2.)* | 32,133,939 | 23,023,063 |
| 4. Funded percentage *(2. ÷ 1.)* | 80% | 85% |
| 5. Combined valuation payroll | $49,565,888 | $47,678,323 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 65% | 48% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($13,100,547) | ($1,079,626) | ($1,002,086) | ($13,023,007) | ($1,120,112) |
| December 31, 2009 | $36,072,940 | $2,755,594 | $2,768,534 | $36,085,880 | $2,858,929 |
| December 31, 2011 | N/A | N/A | N/A | $9,071,066 | $669,896 |
| **Total** | | | | **$32,133,939** | **$2,408,713** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $155,805,361 |
| b. Normal cost at December 31, 2010 | 3,388,691 |
| c. Benefit payments during 2011 | (7,415,039) |
| d. Interest at 8.0% to December 31, 2011 | 12,438,923 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 164,217,936 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 164,217,936 |
| 2. Actuarial accrued liability at December 31, 2011 | 163,806,911 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 411,025 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 132,782,298 |
| b. Contributions for 2011[1] | 3,438,707 |
| c. Benefit payments and expenses during 2011 | (7,463,962) |
| d. Interest at 8.0% to December 31, 2011 | 10,461,574 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 139,218,616 |
| 5. Actuarial value of assets at December 31, 2011 | 131,672,972 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (7,545,644) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($7,134,619)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$23,023,063** |
| 2. Expected increase | 1,976,257 |
| 3. Liability (gain)/loss | (411,025) |
| 4. Asset (gain)/loss | 7,545,644 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$32,133,939** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $863,955 | $5,651,110 | 15.29% | $887,933 | $6,323,138 | 14.04% |
| Tier 1 General Service | 511,602 | 7,883,507 | 6.49% | 477,447 | 7,813,259 | 6.11% |
| Tier 2 Police & Fire | 1,122,356 | 7,947,251 | 14.12% | 1,058,231 | 7,688,418 | 13.76% |
| Tier 2 General Service | 1,036,348 | 10,756,154 | 9.63% | 965,080 | 10,604,518 | 9.10% |
| **Total** | **$3,534,261** | **$32,238,022** | **10.96%** | **$3,388,691** | **$32,429,333** | **10.45%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $32,133,939 | $23,023,063 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 2,408,713 | 1,679,710 |
| 3. Combined valuation payroll | 49,565,888 | 47,678,323 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.86% | 3.52% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.96% | 10.45% |
| b. Tier 1/Tier 2 UAL rate | 4.86% | 3.52% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 15.95% | 14.09% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 11.87% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 11.87% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.37% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 80% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.87% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.87% |
| 7. July 1, 2013 total pension rate, before adjustment | 15.95% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.08%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.86% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.78% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.87% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.96% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.96% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.87% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.96% | 10.45% |
| b. Tier 1/Tier 2 UAL rate | 3.78% | 3.52% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.87% | 14.09% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $7,883,507 | $5,651,110 | $13,534,617 |
| Tier 2 | 10,756,154 | 7,947,251 | 18,703,405 |
| Tier 1/Tier 2 valuation payroll | 18,639,661 | 13,598,361 | 32,238,022 |
| OPSRP valuation payroll | 12,376,603 | 4,951,263 | 17,327,866 |
| **Combined valuation payroll** | **$31,016,264** | **$18,549,624** | **$49,565,888** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 109 | 161 | 290 | 560 | 109 | 165 | 365 | 639 |
| Police & Fire | 58 | 86 | 61 | 205 | 66 | 86 | 58 | 210 |
| Total | 167 | 247 | 351 | 765 | 175 | 251 | 423 | 849 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 91 | 114 | N/A | 205 | 120 | 155 | N/A | 275 |
| Police & Fire | 10 | 11 | N/A | 21 | 11 | 12 | N/A | 23 |
| Total | 101 | 125 | N/A | 226 | 131 | 167 | N/A | 298 |
| **Dormant Members** | | | | | | | | |
| General Service | 53 | 50 | 9 | 112 | 58 | 44 | 3 | 105 |
| Police & Fire | 14 | 6 | 2 | 22 | 12 | 3 | 0 | 15 |
| Total | 67 | 56 | 11 | 134 | 70 | 47 | 3 | 120 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 172 | 15 | 1 | 188 | 156 | 10 | 1 | 167 |
| Police & Fire | 83 | 8 | 1 | 92 | 78 | 1 | 0 | 79 |
| Total | 255 | 23 | 2 | 280 | 234 | 11 | 1 | 246 |
| **Grand Total Number of Members** | **590** | **451** | **364** | **1,405** | **610** | **476** | **427** | **1,513** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | 1 | | | | | | | | | 1 |
| 30-34 | 1 | 18 | 5 | 1 | | | | | | 25 |
| 35-39 | | 14 | 39 | 5 | | | | | | 58 |
| 40-44 | | 8 | 45 | 26 | 6 | | | | | 85 |
| 45-49 | 1 | 9 | 31 | 23 | 20 | | | | | 84 |
| 50-54 | | 6 | 15 | 20 | 11 | 5 | 3 | | | 60 |
| 55-59 | | 4 | 16 | 10 | 9 | 4 | 5 | 1 | | 49 |
| 60-64 | | 6 | 16 | 11 | 9 | 1 | 1 | | | 44 |
| 65-69 | | | 4 | 2 | 1 | | | | | 7 |
| 70-74 | | | | | 1 | | | | | 1 |
| 75+ | | | | | | | | | | |
| Total | 3 | 65 | 171 | 98 | 57 | 10 | 9 | 1 | | 414 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 2 | 675 |
| 35-39 | 15 | 366 |
| 40-44 | 19 | 720 |
| 45-49 | 25 | 521 |
| 50-54 | 21 | 1,021 |
| 55-59 | 15 | 787 |
| 60-64 | 13 | 1,222 |
| 65-69 | 10 | 323 |
| 70-74 | 1 | 167 |
| 75+ | 2 | 336 |
| Total | 123 | 705 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 3 | 1,704 |
| 45-49 | 3 | 1,912 |
| 50-54 | 19 | 2,881 |
| 55-59 | 38 | 2,428 |
| 60-64 | 84 | 2,301 |
| 65-69 | 55 | 1,303 |
| 70-74 | 35 | 1,407 |
| 75-79 | 18 | 1,194 |
| 80-84 | 11 | 920 |
| 85-89 | 10 | 1,461 |
| 90-94 | 2 | 453 |
| 95-99 | | |
| 100+ | | |
| Total | 278 | 1,868 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Jacksonville/2222
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Jacksonville/2222

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Jacksonville -- #2222

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Jacksonville to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Jacksonville.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Jacksonville*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 11.27% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.81% | 2.81% | 2.81% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.23%** | **9.23%** | **11.96%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.82%** | **9.72%** | **12.45%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 89%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.08% | 14.08% |
| Minimum July 1, 2015 Rate | 11.08% | 8.08% |
| Maximum July 1, 2015 Rate | 17.08% | 20.08% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 26 | 30 |
| Amortization factor | 15.859 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.47% | 1.76% | 1.76% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.08% | 2.81% | 2.81% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $2,881,027 | $2,506,115 | ($374,912) | 115% | $771,256 | (49%) |
| 12/31/2007 | 3,139,017 | 2,710,882 | (428,135) | 116% | 874,617 | (49%) |
| 12/31/2008 | 2,427,908 | 2,950,462 | 522,554 | 82% | 931,696 | 56% |
| 12/31/2009 | 2,892,816 | 3,153,727 | 260,911 | 92% | 907,545 | 29% |
| 12/31/2010 | 3,089,410 | 3,322,938 | 233,528 | 93% | 939,937 | 25% |
| 12/31/2011 | 3,132,652 | 3,510,590 | 377,938 | 89% | 877,859 | 43% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Jacksonville*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $377,938 | $233,528 |
| Allocated pooled OPSRP UAL | 14,978 | 11,670 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 392,916 | 245,198 |
| Combined valuation payroll | 877,859 | 939,937 |
| Net pension UAL as a percentage of payroll | 45% | 26% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $22,741 | $33,817 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $62,263 | $71,849 |
| Tier 1/Tier 2 valuation payroll | 552,248 | 651,020 |
| Tier 1/Tier 2 pension normal cost rate | 11.27% | 11.04% |
| Tier 1/ Tier 2 Actuarial accrued liability | $3,510,590 | $3,322,938 |
| Actuarial asset value | 3,132,652 | 3,089,410 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 377,938 | 233,528 |
| Tier 1/ Tier 2 Funded status | 89% | 93% |
| Combined valuation payroll | $877,859 | $939,937 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 43% | 25% |
| Tier 1/Tier 2 UAL rate | 2.81% | 1.72% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 12 | 14 |
| Tier 1/Tier 2 dormant members | 4 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 11 | 10 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 877,859 | 939,937 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $665,865 | $643,837 |
| 2. Employer reserves | 1,855,269 | 1,814,509 |
| 3. Benefits in force reserve | 611,519 | 631,063 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$3,132,652** | **$3,089,410** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $3,089,410 |
| 2. Regular employer contributions | 51,075 |
| 3. Benefit payments and expenses | (102,456) |
| 4. Adjustments [2] | 7,041 |
| 5. Interest credited | 87,583 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$3,132,652** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $20,860 | $21,192 |
| Tier 1 General Service | 13,556 | 18,644 |
| Tier 2 Police & Fire | 12,809 | 17,571 |
| Tier 2 General Service | 15,038 | 14,442 |
| **Total** | **$62,263** | **$71,849** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $62,263 | $62,263 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $598,398 | $557,713 |
| ▪ Tier 1 General Service | 816,401 | 755,150 |
| ▪ Tier 2 Police & Fire | 248,180 | 237,057 |
| ▪ Tier 2 General Service | 291,358 | 259,811 |
| ▪ **Total Active Members** | **$1,954,337** | **$1,809,731** |
| Dormant Members | 444,061 | 474,129 |
| Retired Members and Beneficiaries | 1,112,192 | 1,039,078 |
| **Total Actuarial Accrued Liability** | **$3,510,590** | **$3,322,938** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $3,510,590 | $3,510,590 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $3,510,590 | $3,322,938 |
| 2. Actuarial value of assets | 3,132,652 | 3,089,410 |
| 3. Unfunded accrued liability *(1. – 2.)* | 377,938 | 233,528 |
| 4. Funded percentage *(2. ÷ 1.)* | 89% | 93% |
| 5. Combined valuation payroll | $877,859 | $939,937 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 43% | 25% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($470,736) | ($38,793) | ($36,008) | ($467,951) | ($40,248) |
| December 31, 2009 | $735,076 | $56,153 | $56,416 | $735,339 | $58,259 |
| December 31, 2011 | N/A | N/A | N/A | $110,550 | $8,164 |
| **Total** | | | | **$377,938** | **$26,175** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,322,938 |
| b. Normal cost at December 31, 2010 | 71,849 |
| c. Benefit payments during 2011 | (101,784) |
| d. Interest at 8.0% to December 31, 2011 | 267,512 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,560,515 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,560,515 |
| 2. Actuarial accrued liability at December 31, 2011 | 3,510,590 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 49,925 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,089,410 |
| b. Contributions for 2011[1] | 51,075 |
| c. Benefit payments and expenses during 2011 | (102,456) |
| d. Interest at 8.0% to December 31, 2011 | 245,098 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,283,126 |
| 5. Actuarial value of assets at December 31, 2011 | 3,132,652 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (150,474) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($100,549)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$233,528** |
| 2. Expected increase | 43,861 |
| 3. Liability (gain)/loss | (49,925) |
| 4. Asset (gain)/loss | 150,474 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$377,938** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $20,860 | $162,574 | 12.83% | $21,192 | $166,709 | 12.71% |
| Tier 1 General Service | 13,556 | 191,747 | 7.07% | 18,644 | 263,800 | 7.07% |
| Tier 2 Police & Fire | 12,809 | 76,506 | 16.74% | 17,571 | 100,212 | 17.53% |
| Tier 2 General Service | 15,038 | 121,421 | 12.39% | 14,442 | 120,299 | 12.01% |
| **Total** | **$62,263** | **$552,248** | **11.27%** | **$71,849** | **$651,020** | **11.04%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $377,938 | $233,528 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 26,175 | 15,085 |
| 3. Combined valuation payroll | 877,859 | 939,937 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.98% | 1.60% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.27% | 11.04% |
| b. Tier 1/Tier 2 UAL rate | 2.98% | 1.60% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.38% | 12.76% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 11.08% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 11.08% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.22% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 89% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.08% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.08% |
| 7. July 1, 2013 total pension rate, before adjustment | 14.38% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.30%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.98% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.68% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.08% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 11.27% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 11.27% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.08% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.27% | 11.04% |
| b. Tier 1/Tier 2 UAL rate | 2.68% | 1.60% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 14.08% | 12.76% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $191,747 | $162,574 | $354,321 |
| Tier 2 | 121,421 | 76,506 | 197,927 |
| Tier 1/Tier 2 valuation payroll | 313,168 | 239,080 | 552,248 |
| OPSRP valuation payroll | 141,485 | 184,126 | 325,611 |
| **Combined valuation payroll** | **$454,653** | **$423,206** | **$877,859** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 4 | 3 | 4 | 11 | 5 | 3 | 2 | 10 |
| Police & Fire | 3 | 2 | 6 | 11 | 3 | 3 | 6 | 12 |
| Total | 7 | 5 | 10 | 22 | 8 | 6 | 8 | 22 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 3 | 3 | N/A | 6 | 2 | 3 | N/A | 5 |
| Police & Fire | 3 | 4 | N/A | 7 | 3 | 3 | N/A | 6 |
| Total | 6 | 7 | N/A | 13 | 5 | 6 | N/A | 11 |
| **Dormant Members** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 3 | 2 | 0 | 5 |
| Police & Fire | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| Total | 4 | 0 | 1 | 5 | 4 | 2 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 2 | 0 | 6 | 5 | 0 | 0 | 5 |
| Police & Fire | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| Total | 9 | 2 | 0 | 11 | 10 | 0 | 0 | 10 |
| **Grand Total Number of Members** | **26** | **14** | **11** | **51** | **27** | **14** | **8** | **49** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | 1 | 1 | | | | | | | **2** |
| **45-49** | | 1 | | 3 | 1 | | | | | **5** |
| **50-54** | | | | 1 | | | | | | **1** |
| **55-59** | | | 2 | 1 | | | | | | **3** |
| **60-64** | | | 1 | | | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **2** | **4** | **5** | **1** | | | | | **12** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 1 | 1,364 |
| **40-44** | 1 | 794 |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 2,689 |
| **60-64** | 1 | 9 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 4 | 1,214 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 3 | 528 |
| **60-64** | 4 | 327 |
| **65-69** | 1 | 97 |
| **70-74** | 1 | 1,216 |
| **75-79** | 1 | 2,460 |
| **80-84** | 1 | 536 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 11 | 655 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Joseph/2232
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Joseph/2232

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Joseph/2232

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Joseph -- #2232

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Joseph to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Joseph.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Joseph*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.64% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 7.81% | 7.81% | 7.81% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.60%** | **14.23%** | **16.96%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **18.19%** | **14.72%** | **17.45%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 76%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.45% | 17.45% |
| Minimum July 1, 2015 Rate | 13.96% | 10.47% |
| Maximum July 1, 2015 Rate | 20.94% | 24.43% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 22 |
| Amortization factor | 17.175 | 14.544 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.25% | 7.36% | 7.36% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 20.55% | 10.91% | 10.91% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $895,208 | $914,648 | $19,440 | 98% | $189,326 | 10% |
| 12/31/2007 | 967,742 | 941,036 | (26,706) | 103% | 182,616 | (15%) |
| 12/31/2008 | 671,776 | 917,100 | 245,324 | 73% | 139,460 | 176% |
| 12/31/2009 | 764,563 | 947,395 | 182,832 | 81% | 173,248 | 106% |
| 12/31/2010 | 820,617 | 992,526 | 171,909 | 83% | 187,023 | 92% |
| 12/31/2011 | 777,639 | 1,026,462 | 248,823 | 76% | 133,837 | 186% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Joseph*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $248,823 | $171,909 |
| Allocated pooled OPSRP UAL | 2,284 | 2,322 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 251,107 | 174,231 |
| Combined valuation payroll | 133,837 | 187,023 |
| Net pension UAL as a percentage of payroll | 188% | 93% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,467 | $6,729 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $4,629 | $9,207 |
| Tier 1/Tier 2 valuation payroll | 48,001 | 118,397 |
| Tier 1/Tier 2 pension normal cost rate | 9.64% | 7.78% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,026,462 | $992,526 |
| Actuarial asset value | 777,639 | 820,617 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 248,823 | 171,909 |
| Tier 1/ Tier 2 Funded status | 76% | 83% |
| Combined valuation payroll | $133,837 | $187,023 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 186% | 92% |
| Tier 1/Tier 2 UAL rate | 7.81% | 6.97% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 4 |
| Tier 1/Tier 2 dormant members | 2 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 133,837 | 187,023 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $77,178 | $98,489 |
| 2. Employer reserves | 266,889 | 310,398 |
| 3. Benefits in force reserve | 433,573 | 411,730 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$777,639** | **$820,617** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $820,617 |
| 2. Regular employer contributions | 13,099 |
| 3. Benefit payments and expenses | (72,642) |
| 4. Adjustments[2] | (5,905) |
| 5. Interest credited | 22,470 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$777,639** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 4,629 | 1,525 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 7,682 |
| **Total** | **$4,629** | **$9,207** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $4,629 | $4,629 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 115,950 | 94,427 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 103,153 |
| ▪ **Total Active Members** | **$115,950** | **$197,580** |
| Dormant Members | 121,958 | 117,010 |
| Retired Members and Beneficiaries | 788,554 | 677,936 |
| **Total Actuarial Accrued Liability** | **$1,026,462** | **$992,526** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,026,462 | $1,026,462 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,026,462 | $992,526 |
| 2. Actuarial value of assets | 777,639 | 820,617 |
| 3. Unfunded accrued liability *(1. – 2.)* | 248,823 | 171,909 |
| 4. Funded percentage *(2. ÷ 1.)* | 76% | 83% |
| 5. Combined valuation payroll | $133,837 | $187,023 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 186% | 92% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($56,742) | ($4,676) | ($4,340) | ($56,406) | ($4,851) |
| December 31, 2009 | $240,443 | $18,367 | $18,454 | $240,530 | $19,056 |
| December 31, 2011 | N/A | N/A | N/A | $64,699 | $4,778 |
| **Total** | | | | **$248,823** | **$18,983** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $992,526 |
| b. Normal cost at December 31, 2010 | 9,207 |
| c. Benefit payments during 2011 | (72,166) |
| d. Interest at 8.0% to December 31, 2011 | 77,252 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,006,819 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,006,819 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,026,462 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (19,643) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 820,617 |
| b. Contributions for 2011[1] | 13,099 |
| c. Benefit payments and expenses during 2011 | (72,642) |
| d. Interest at 8.0% to December 31, 2011 | 63,268 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 824,342 |
| 5. Actuarial value of assets at December 31, 2011 | 777,639 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (46,702) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($66,345)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$171,909** |
| 2. Expected increase | 10,569 |
| 3. Liability (gain)/loss | 19,643 |
| 4. Asset (gain)/loss | 46,702 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$248,823** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 4,629 | 48,001 | 9.64% | 1,525 | 34,306 | 4.45% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 7,682 | 84,091 | 9.14% |
| **Total** | **$4,629** | **$48,001** | **9.64%** | **$9,207** | **$118,397** | **7.78%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $248,823 | $171,909 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 18,983 | 12,820 |
| 3. Combined valuation payroll | 133,837 | 187,023 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 14.18% | 6.85% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.64% | 7.78% |
| b. Tier 1/Tier 2 UAL rate | 14.18% | 6.85% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 23.95% | 14.75% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 13.25% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.25% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.65% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 76% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.20% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 9.05% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 17.45% |
| 7. July 1, 2013 total pension rate, before adjustment | 23.95% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (6.50%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 14.18% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 7.68% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.45% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.64% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.64% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.45% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.64% | 7.78% |
| b. Tier 1/Tier 2 UAL rate | 7.68% | 6.85% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 17.45% | 14.75% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $48,001 | $0 | $48,001 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 48,001 | 0 | 48,001 |
| OPSRP valuation payroll | 85,836 | 0 | 85,836 |
| **Combined valuation payroll** | **$133,837** | **$0** | **$133,837** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 0 | 3 | 5 | 2 | 2 | 2 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 3 | 5 | 2 | 2 | 2 | 6 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 1 | 0 | 5 | 4 | 0 | 0 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 1 | 0 | 5 | 4 | 0 | 0 | 4 |
| **Grand Total Number of Members** | **7** | **2** | **3** | **12** | **7** | **2** | **2** | **11** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | 1 | | | | | | **1** |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | **2** | | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 1 | 374 |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 751 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 2 | 563 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 1 | 765 |
| **65-69** | 1 | 2,665 |
| **70-74** | 2 | 1,223 |
| **75-79** | 1 | 435 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 5 | 1,262 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Keizer/2279
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Keizer/2279

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Keizer/2279

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Keizer -- #2279

**Secondary Employers**

2539 Keizer Water District

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Keizer to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Keizer.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Keizer*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 14.67% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (1.72%) | (1.72%) | (1.72%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.10%** | **4.70%** | **7.43%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.69%** | **5.19%** | **7.92%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 94%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.95% | 12.95% |
| Minimum July 1, 2015 Rate | 9.95% | 6.95% |
| Maximum July 1, 2015 Rate | 15.95% | 18.95% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.25% | 0.45% | 0.45% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.67% | 1.00% | 1.00% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $13,123,262 | $10,273,073 | ($2,850,189) | 128% | $2,729,005 | (104%) |
| 12/31/2007 | 14,469,554 | 11,359,526 | (3,110,028) | 127% | 3,071,890 | (101%) |
| 12/31/2008 | 11,704,780 | 12,202,765 | 497,985 | 96% | 3,318,225 | 15% |
| 12/31/2009 | 13,407,773 | 13,634,579 | 226,806 | 98% | 3,677,284 | 6% |
| 12/31/2010 | 14,718,129 | 14,359,732 | (358,397) | 103% | 5,955,156 | (6%) |
| 12/31/2011 | 14,874,482 | 15,789,873 | 915,391 | 94% | 5,827,628 | 16% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Keizer*

| | **Actuarial Valuation as of** | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $915,391 | ($358,397) |
| Allocated pooled OPSRP UAL | 99,433 | 73,941 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,014,824 | (284,456) |
| Combined valuation payroll | 5,827,628 | 5,955,156 |
| Net pension UAL as a percentage of payroll | 17% | (5%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $150,968 | $214,257 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $444,543 | $429,703 |
| Tier 1/Tier 2 valuation payroll | 3,029,402 | 3,211,229 |
| Tier 1/Tier 2 pension normal cost rate | 14.67% | 13.38% |
| Tier 1/ Tier 2 Actuarial accrued liability | $15,789,873 | $14,359,732 |
| Actuarial asset value | 14,874,482 | 14,718,129 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 915,391 | (358,397) |
| Tier 1/ Tier 2 Funded status | 94% | 103% |
| Combined valuation payroll | $5,827,628 | $5,955,156 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 16% | (6%) |
| Tier 1/Tier 2 UAL rate | (1.72%) | (0.62%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 37 | 39 |
| Tier 1/Tier 2 dormant members | 5 | 4 |
| Tier 1/Tier 2 retirees and beneficiaries | 14 | 11 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| ($ in millions)<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 5,827,628 | 5,955,156 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $3,251,663 | $3,464,006 |
| 2. Employer reserves | 9,216,674 | 9,347,828 |
| 3. Benefits in force reserve | 2,406,145 | 1,906,296 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$14,874,482** | **$14,718,129** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $14,718,129 |
| 2. Regular employer contributions | 127,292 |
| 3. Benefit payments and expenses | (403,133) |
| 4. Adjustments[2] | (32,760) |
| 5. Interest credited | 464,954 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$14,874,482** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $304,844 | $289,948 |
| Tier 1 General Service | 5,770 | 5,404 |
| Tier 2 Police & Fire | 88,434 | 91,899 |
| Tier 2 General Service | 45,495 | 42,452 |
| **Total** | **$444,543** | **$429,703** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $444,543 | $444,543 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $9,292,263 | $8,775,821 |
| ▪ Tier 1 General Service | 59,700 | 639,786 |
| ▪ Tier 2 Police & Fire | 1,443,659 | 1,273,862 |
| ▪ Tier 2 General Service | 188,388 | 150,074 |
| ▪ **Total Active Members** | **$10,984,010** | **$10,839,543** |
| Dormant Members | 429,721 | 381,373 |
| Retired Members and Beneficiaries | 4,376,142 | 3,138,816 |
| **Total Actuarial Accrued Liability** | **$15,789,873** | **$14,359,732** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $15,789,873 | $15,789,873 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $15,789,873 | $14,359,732 |
| 2. Actuarial value of assets | 14,874,482 | 14,718,129 |
| 3. Unfunded accrued liability *(1. – 2.)* | 915,391 | (358,397) |
| 4. Funded percentage *(2. ÷ 1.)* | 94% | 103% |
| 5. Combined valuation payroll | $5,827,628 | $5,955,156 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 16% | (6%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($3,070,467) | ($253,039) | ($234,866) | ($3,052,294) | ($262,528) |
| December 31, 2009 | $3,315,208 | $253,248 | $254,436 | $3,316,396 | $262,745 |
| December 31, 2011 | N/A | N/A | N/A | $651,289 | $48,098 |
| **Total** | | | | **$915,391** | **$48,315** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $14,359,732 |
| b. Normal cost at December 31, 2010 | 429,703 |
| c. Benefit payments during 2011 | (400,491) |
| d. Interest at 8.0% to December 31, 2011 | 1,167,135 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 15,556,079 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 15,556,079 |
| 2. Actuarial accrued liability at December 31, 2011 | 15,789,873 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (233,794) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 14,718,129 |
| b. Contributions for 2011[1] | 127,292 |
| c. Benefit payments and expenses during 2011 | (403,133) |
| d. Interest at 8.0% to December 31, 2011 | 1,166,417 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 15,608,705 |
| 5. Actuarial value of assets at December 31, 2011 | 14,874,482 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (734,223) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($968,017)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($358,397)** |
| 2. Expected increase | 305,771 |
| 3. Liability (gain)/loss | 233,794 |
| 4. Asset (gain)/loss | 734,223 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$915,391** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $304,844 | $1,794,017 | 16.99% | $289,948 | $1,831,816 | 15.83% |
| Tier 1 General Service | 5,770 | 162,822 | 3.54% | 5,404 | 270,715 | 2.00% |
| Tier 2 Police & Fire | 88,434 | 665,577 | 13.29% | 91,899 | 696,601 | 13.19% |
| Tier 2 General Service | 45,495 | 406,986 | 11.18% | 42,452 | 412,097 | 10.30% |
| **Total** | **$444,543** | **$3,029,402** | **14.67%** | **$429,703** | **$3,211,229** | **13.38%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $915,391 | ($358,397) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 48,315 | (44,333) |
| 3. Combined valuation payroll | 5,827,628 | 5,955,156 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.83% | (0.74%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.67% | 13.38% |
| b. Tier 1/Tier 2 UAL rate | 0.83% | (0.74%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 15.63% | 12.76% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 9.95% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.95% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.99% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 94% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 6.95% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 12.95% |
| 7. July 1, 2013 total pension rate, before adjustment | 15.63% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.68%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.83% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.85%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.95% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 14.67% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.67% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.95% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.67% | 13.38% |
| b. Tier 1/Tier 2 UAL rate | (1.85%) | (0.74%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 12.95% | 12.76% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $162,822 | $1,794,017 | $1,956,839 |
| Tier 2 | 406,986 | 665,577 | 1,072,563 |
| Tier 1/Tier 2 valuation payroll | 569,808 | 2,459,594 | 3,029,402 |
| OPSRP valuation payroll | 2,265,246 | 532,980 | 2,798,226 |
| **Combined valuation payroll** | **$2,835,054** | **$2,992,574** | **$5,827,628** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 5 | 42 | 49 | 3 | 5 | 42 | 50 |
| Police & Fire | 21 | 9 | 7 | 37 | 22 | 9 | 7 | 38 |
| Total | 23 | 14 | 49 | 86 | 25 | 14 | 49 | 88 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 0 | 0 | N/A | 0 |
| Police & Fire | 15 | 7 | N/A | 22 | 17 | 6 | N/A | 23 |
| Total | 16 | 7 | N/A | 23 | 17 | 6 | N/A | 23 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Police & Fire | 4 | 1 | 0 | 5 | 2 | 1 | 0 | 3 |
| Total | 4 | 1 | 0 | 5 | 3 | 1 | 0 | 4 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 5 | 0 | 0 | 5 | 4 | 0 | 0 | 4 |
| Police & Fire | 9 | 0 | 0 | 9 | 7 | 0 | 0 | 7 |
| Total | 14 | 0 | 0 | 14 | 11 | 0 | 0 | 11 |
| **Grand Total Number of Members** | **57** | **22** | **49** | **128** | **56** | **21** | **49** | **126** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | | | | | | | | **1** |
| **35-39** | | 2 | 2 | | | | | | | **4** |
| **40-44** | | | 6 | 10 | 1 | | | | | **17** |
| **45-49** | | | | 5 | 3 | | | | | **8** |
| **50-54** | | 1 | | | 2 | | | | | **3** |
| **55-59** | | 1 | 1 | | | | 1 | | | **3** |
| **60-64** | 1 | | | | | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | **1** | **5** | **9** | **15** | **6** | | **1** | | | **37** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 2 | 1,159 |
| **45-49** | 2 | 318 |
| **50-54** | 1 | 2,020 |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 5 | 994 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 3 | 1,455 |
| **55-59** | 1 | 1,230 |
| **60-64** | 5 | 2,444 |
| **65-69** | 3 | 2,533 |
| **70-74** | 1 | 379 |
| **75-79** | | |
| **80-84** | | |
| **85-89** | 1 | 2,275 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 14 | 2,005 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Maupin/2283
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Maupin/2283

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff.  This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information.  We found this information to be reasonably consistent and comparable with information used for other purposes.  The valuation results depend on the integrity of this information.  If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date.  It can neither predict the System's future condition nor guarantee future financial soundness.  Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions.  While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different.  No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law.  Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.  The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers.  Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements.  The computations prepared for these two purposes may differ as disclosed in our report.  The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals.  The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45.  Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report.  Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Maupin/2283

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

City of Maupin -- #2283

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Maupin to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Maupin.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Maupin*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.38% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.86% | 0.86% | 0.86% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.39%** | **7.28%** | **10.01%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **8.98%** | **7.77%** | **10.50%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 95%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.24% | 8.24% |
| Minimum July 1, 2015 Rate | 5.24% | 2.24% |
| Maximum July 1, 2015 Rate | 11.24% | 14.24% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 28 | 11 |
| Amortization factor | 16.562 | 9.044 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.46% | 0.48% | 0.48% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.24% | 0.86% | 0.86% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $610,598 | $554,583 | ($56,016) | 110% | $215,898 | (26%) |
| 12/31/2007 | 681,319 | 607,826 | (73,493) | 112% | 268,477 | (27%) |
| 12/31/2008 | 593,257 | 672,812 | 79,555 | 88% | 280,132 | 28% |
| 12/31/2009 | 707,555 | 716,581 | 9,026 | 99% | 319,315 | 3% |
| 12/31/2010 | 787,391 | 789,323 | 1,932 | 100% | 331,614 | 1% |
| 12/31/2011 | 832,750 | 878,410 | 45,660 | 95% | 358,633 | 13% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Maupin*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $45,660 | $1,932 |
| Allocated pooled OPSRP UAL | 6,119 | 4,117 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 51,779 | 6,049 |
| Combined valuation payroll | 358,633 | 331,614 |
| Net pension UAL as a percentage of payroll | 14% | 2% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $9,291 | $11,931 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $18,109 | $15,179 |
| Tier 1/Tier 2 valuation payroll | 245,528 | 228,064 |
| Tier 1/Tier 2 pension normal cost rate | 7.38% | 6.66% |
| Tier 1/ Tier 2 Actuarial accrued liability | $878,410 | $789,323 |
| Actuarial asset value | 832,750 | 787,391 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 45,660 | 1,932 |
| Tier 1/ Tier 2 Funded status | 95% | 100% |
| Combined valuation payroll | $358,633 | $331,614 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 13% | 1% |
| Tier 1/Tier 2 UAL rate | 0.86% | (0.05%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 5 | 4 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | **New** | **Continuing** | **Total** |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 358,633 | 331,614 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $295,070 | $276,727 |
| 2. Employer reserves | 532,668 | 502,552 |
| 3. Benefits in force reserve | 5,012 | 8,111 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$832,750** | **$787,391** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $787,391 |
| 2. Regular employer contributions | 18,737 |
| 3. Benefit payments and expenses | (840) |
| 4. Adjustments[2] | (6,689) |
| 5. Interest credited | 34,151 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$832,750** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 15,157 | 12,515 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 2,952 | 2,664 |
| **Total** | **$18,109** | **$15,179** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $18,109 | $18,109 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 840,249 | 752,331 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 29,045 | 23,636 |
| ▪ **Total Active Members** | **$869,294** | **$775,967** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 9,116 | 13,356 |
| **Total Actuarial Accrued Liability** | **$878,410** | **$789,323** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $878,410 | $878,410 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $878,410 | $789,323 |
| 2. Actuarial value of assets | 832,750 | 787,391 |
| 3. Unfunded accrued liability *(1. – 2.)* | 45,660 | 1,932 |
| 4. Funded percentage *(2. ÷ 1.)* | 95% | 100% |
| 5. Combined valuation payroll | $358,633 | $331,614 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 13% | 1% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($121,754) | ($10,035) | ($9,313) | ($121,032) | ($10,411) |
| December 31, 2009 | $131,492 | $10,045 | $10,092 | $131,539 | $10,422 |
| December 31, 2011 | N/A | N/A | N/A | $35,153 | $2,596 |
| **Total** | | | | **$45,660** | **$2,607** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $789,323 |
| b. Normal cost at December 31, 2010 | 15,179 |
| c. Benefit payments during 2011 | (834) |
| d. Interest at 8.0% to December 31, 2011 | 64,327 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 867,995 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 867,995 |
| 2. Actuarial accrued liability at December 31, 2011 | 878,410 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (10,415) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 787,391 |
| b. Contributions for 2011[1] | 18,737 |
| c. Benefit payments and expenses during 2011 | (840) |
| d. Interest at 8.0% to December 31, 2011 | 63,707 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 868,995 |
| 5. Actuarial value of assets at December 31, 2011 | 832,750 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (36,246) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($46,661)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$1,932** |
| 2. Expected increase | (2,933) |
| 3. Liability (gain)/loss | 10,415 |
| 4. Asset (gain)/loss | 36,246 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$45,660** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 15,157 | 209,476 | 7.24% | 12,515 | 193,855 | 6.46% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 2,952 | 36,052 | 8.19% | 2,664 | 34,209 | 7.79% |
| **Total** | **$18,109** | **$245,528** | **7.38%** | **$15,179** | **$228,064** | **6.66%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $45,660 | $1,932 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 2,607 | (566) |
| 3. Combined valuation payroll | 358,633 | 331,614 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.73% | (0.17%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.38% | 6.66% |
| b. Tier 1/Tier 2 UAL rate | 0.73% | (0.17%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 8.24% | 6.61% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.46% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.46% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.09% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 95% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.46% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.46% |
| 7. | July 1, 2013 total pension rate, before adjustment | 8.24% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.73% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.73% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.24% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.38% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.38% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.24% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.38% | 6.66% |
| b. Tier 1/Tier 2 UAL rate | 0.73% | (0.17%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 8.24% | 6.61% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $209,476 | $0 | $209,476 |
| Tier 2 | 36,052 | 0 | 36,052 |
| Tier 1/Tier 2 valuation payroll | 245,528 | 0 | 245,528 |
| OPSRP valuation payroll | 113,105 | 0 | 113,105 |
| **Combined valuation payroll** | **$358,633** | **$0** | **$358,633** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 4 | 1 | 5 | 10 | 3 | 1 | 5 | 9 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 1 | 5 | 10 | 3 | 1 | 5 | 9 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 3 | 0 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **6** | **1** | **5** | **12** | **6** | **1** | **5** | **12** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | 1 | | | | | | | | **1** |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | 2 | | | | | **2** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | 1 | | | 1 | | | | | | **2** |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | **1** | **1** | | **1** | **2** | | | | | **5** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | 1 | 60 |
| 75-79 | 1 | 17 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 2 | 39 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Merrill/2246
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Merrill/2246

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott Preppernau

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Merrill -- #2246

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Merrill to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Merrill.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Merrill*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.99% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (3.52%) | (3.52%) | (3.52%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **6.62%** | **2.90%** | **5.63%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **7.21%** | **3.39%** | **6.12%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 104%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 6.47% | 6.47% |
| Minimum July 1, 2015 Rate | 3.47% | 0.47% |
| Maximum July 1, 2015 Rate | 9.47% | 12.47% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 10 | 30 |
| Amortization factor | 7.888 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (27.70%) | (28.04%) | (28.04%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.47% | (3.52%) | (3.52%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $331,096 | $234,765 | ($96,331) | 141% | $40,602 | (237%) |
| 12/31/2007 | 360,009 | 283,701 | (76,308) | 127% | 9,905 | (770%) |
| 12/31/2008 | 287,155 | 330,882 | 43,727 | 87% | 12,463 | 351% |
| 12/31/2009 | 326,530 | 289,667 | (36,863) | 113% | 7,631 | (483%) |
| 12/31/2010 | 358,924 | 319,024 | (39,900) | 113% | 48,700 | (82%) |
| 12/31/2011 | 366,777 | 352,212 | (14,565) | 104% | 49,748 | (29%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Merrill*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($14,565) | ($39,900) |
| Allocated pooled OPSRP UAL | 849 | 605 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (13,716) | (39,295) |
| Combined valuation payroll | 49,748 | 48,700 |
| Net pension UAL as a percentage of payroll | (28%) | (81%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,289 | $1,752 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $4,968 | $4,005 |
| Tier 1/Tier 2 valuation payroll | 49,748 | 48,700 |
| Tier 1/Tier 2 pension normal cost rate | 9.99% | 11.15% |
| Tier 1/ Tier 2 Actuarial accrued liability | $352,212 | $319,024 |
| Actuarial asset value | 366,777 | 358,924 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (14,565) | (39,900) |
| Tier 1/ Tier 2 Funded status | 104% | 113% |
| Combined valuation payroll | $49,748 | $48,700 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (29%) | (82%) |
| Tier 1/Tier 2 UAL rate | (3.52%) | (5.81%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 6 | 6 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 49,748 | 48,700 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $96,185 | $94,817 |
| 2. Employer reserves | 243,110 | 233,559 |
| 3. Benefits in force reserve | 27,482 | 30,548 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$366,777** | **$358,924** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $358,924 |
| 2. | Regular employer contributions | 4,249 |
| 3. | Benefit payments and expenses | (4,604) |
| 4. | Adjustments[2] | (4,826) |
| 5. | Interest credited | 13,035 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$366,777** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $4,968 | $4,005 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$4,968** | **$4,005** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $4,968 | $4,968 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $37,146 | $27,629 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 5,206 | 5,274 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$42,352** | **$32,903** |
| Dormant Members | 259,877 | 235,822 |
| Retired Members and Beneficiaries | 49,983 | 50,299 |
| **Total Actuarial Accrued Liability** | **$352,212** | **$319,024** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $352,212 | $352,212 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $352,212 | $319,024 |
| 2. Actuarial value of assets | 366,777 | 358,924 |
| 3. Unfunded accrued liability *(1. – 2.)* | (14,565) | (39,900) |
| 4. Funded percentage *(2. ÷ 1.)* | 104% | 113% |
| 5. Combined valuation payroll | $49,748 | $48,700 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (29%) | (82%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($80,899) | ($6,667) | ($6,188) | ($80,420) | ($6,917) |
| December 31, 2009 | $44,380 | $3,391 | $3,406 | $44,395 | $3,518 |
| December 31, 2011 | N/A | N/A | N/A | $21,460 | $1,585 |
| **Total** | | | | **($14,565)** | **($1,814)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $319,024 |
| b. Normal cost at December 31, 2010 | 4,005 |
| c. Benefit payments during 2011 | (4,574) |
| d. Interest at 8.0% to December 31, 2011 | 25,659 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 344,114 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 344,114 |
| 2. Actuarial accrued liability at December 31, 2011 | 352,212 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (8,098) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 358,924 |
| b. Contributions for 2011[1] | 4,249 |
| c. Benefit payments and expenses during 2011 | (4,604) |
| d. Interest at 8.0% to December 31, 2011 | 28,700 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 387,267 |
| 5. Actuarial value of assets at December 31, 2011 | 366,777 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (20,491) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($28,589)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($39,900)** |
| 2. Expected increase | (3,254) |
| 3. Liability (gain)/loss | 8,098 |
| 4. Asset (gain)/loss | 20,491 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($14,565)** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $4,968 | $49,748 | 9.99% | $4,005 | $48,700 | 8.22% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$4,968** | **$49,748** | **9.99%** | **$4,005** | **$48,700** | **8.22%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($14,565) | ($39,900) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (1,814) | (3,526) |
| 3. Combined valuation payroll | 49,748 | 48,700 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (3.65%) | (7.24%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.99% | 8.22% |
| b. Tier 1/Tier 2 UAL rate | (3.65%) | (7.24%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 6.47% | 1.10% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 104% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | 6.47% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (3.65%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (3.65%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 6.47% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.99% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.99% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 6.47% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.99% | 11.15% |
| b. Tier 1/Tier 2 UAL rate | (3.65%) | (5.93%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 6.47% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $49,748 | $49,748 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 49,748 | 49,748 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$0** | **$49,748** | **$49,748** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 3 |
| Total | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 4 | 2 | 0 | 6 | 5 | 1 | 0 | 6 |
| Total | 4 | 2 | 0 | 6 | 5 | 1 | 0 | 6 |
| **Grand Total Number of Members** | **6** | **3** | **0** | **9** | **9** | **2** | **0** | **11** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | 1 | | | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | | **1** | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 1,558 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 1,558 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 2 | 15 |
| 65-69 | 1 | 252 |
| 70-74 | 1 | 8 |
| 75-79 | | |
| 80-84 | 2 | 78 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 6 | 74 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Metolius/2195
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Metolius/2195

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Metolius/2195

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Metolius -- #2195

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Metolius to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Metolius.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Metolius*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 11.17% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (5.76%) | (5.76%) | (5.76%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.66%** | **3.39%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **1.15%** | **3.88%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 180%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (1.58%) | (10.37%) | (10.37%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (7.76%) | (13.52%) | (13.52%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $603,604 | $333,413 | ($270,191) | 181% | $99,744 | (271%) |
| 12/31/2007 | 647,643 | 351,298 | (296,345) | 184% | 114,091 | (260%) |
| 12/31/2008 | 477,812 | 357,040 | (120,772) | 134% | 97,627 | (124%) |
| 12/31/2009 | 567,870 | 372,882 | (194,988) | 152% | 108,522 | (180%) |
| 12/31/2010 | 627,697 | 395,551 | (232,146) | 159% | 98,739 | (235%) |
| 12/31/2011 | 560,285 | 312,071 | (248,214) | 180% | 106,200 | (234%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Metolius*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($248,214) | ($232,146) |
| Allocated pooled OPSRP UAL | 1,812 | 1,226 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (246,402) | (230,920) |
| Combined valuation payroll | 106,200 | 98,739 |
| Net pension UAL as a percentage of payroll | (232%) | (234%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,751 | $3,552 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $4,114 | $8,451 |
| Tier 1/Tier 2 valuation payroll | 71,400 | 98,739 |
| Tier 1/Tier 2 pension normal cost rate | 11.17% | 13.90% |
| Tier 1/ Tier 2 Actuarial accrued liability | $312,071 | $395,551 |
| Actuarial asset value | 560,285 | 627,697 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (248,214) | (232,146) |
| Tier 1/ Tier 2 Funded status | 180% | 159% |
| Combined valuation payroll | $106,200 | $98,739 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (234%) | (235%) |
| Tier 1/Tier 2 UAL rate | (5.76%) | (8.56%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 4 | 4 |
| Tier 1/Tier 2 retirees and beneficiaries | 4 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 106,200 | 98,739 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $58,747 | $92,681 |
| 2. Employer reserves | 419,258 | 444,424 |
| 3. Benefits in force reserve | 82,280 | 90,592 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$560,285** | **$627,697** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $627,697 |
| 2. Regular employer contributions | 4,111 |
| 3. Benefit payments and expenses | (13,785) |
| 4. Adjustments [2] | (73,704) |
| 5. Interest credited | 15,966 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$560,285** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 1,062 | 5,238 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 3,052 | 3,213 |
| **Total** | **$4,114** | **$8,451** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $4,114 | $4,114 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $1,139 | $1,081 |
| ▪ Tier 1 General Service | 88,282 | 180,886 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 57,603 | 50,105 |
| ▪ **Total Active Members** | **$147,024** | **$232,072** |
| Dormant Members | 15,401 | 14,314 |
| Retired Members and Beneficiaries | 149,646 | 149,165 |
| **Total Actuarial Accrued Liability** | **$312,071** | **$395,551** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $312,071 | $312,071 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $312,071 | $395,551 |
| 2. Actuarial value of assets | 560,285 | 627,697 |
| 3. Unfunded accrued liability *(1. – 2.)* | (248,214) | (232,146) |
| 4. Funded percentage *(2. ÷ 1.)* | 180% | 159% |
| 5. Combined valuation payroll | $106,200 | $98,739 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (234%) | (235%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($304,459) | ($25,091) | ($23,289) | ($302,657) | ($26,032) |
| December 31, 2009 | $110,595 | $8,448 | $8,488 | $110,635 | $8,765 |
| December 31, 2011 | N/A | N/A | N/A | ($56,192) | ($4,150) |
| **Total** | | | | **($248,214)** | **($21,417)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $395,551 |
| b. Normal cost at December 31, 2010 | 8,451 |
| c. Benefit payments during 2011 | (13,695) |
| d. Interest at 8.0% to December 31, 2011 | 31,772 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 422,079 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 422,079 |
| 2. Actuarial accrued liability at December 31, 2011 | 312,071 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 110,008 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 627,697 |
| b. Contributions for 2011[1] | 4,111 |
| c. Benefit payments and expenses during 2011 | (13,785) |
| d. Interest at 8.0% to December 31, 2011 | 49,829 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 667,851 |
| 5. Actuarial value of assets at December 31, 2011 | 560,285 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (107,567) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **$2,441** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($232,146)** |
| 2. Expected increase | (13,627) |
| 3. Liability (gain)/loss | (110,008) |
| 4. Asset (gain)/loss | 107,567 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($248,214)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 1,062 | 36,370 | 2.92% | 5,238 | 75,665 | 6.92% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 3,052 | 35,030 | 8.71% | 3,213 | 23,074 | 13.92% |
| **Total** | **$4,114** | **$71,400** | **5.76%** | **$8,451** | **$98,739** | **8.56%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($248,214) | ($232,146) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (21,417) | (19,470) |
| 3. Combined valuation payroll | 106,200 | 98,739 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (20.17%) | (19.72%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.76% | 8.56% |
| b. Tier 1/Tier 2 UAL rate | (20.17%) | (19.72%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | (14.28%) | (11.04%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 180% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 0.00% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.41% |
| 7. July 1, 2013 total pension rate, before adjustment | (14.28%) |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 14.28% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (20.17%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (5.89%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 0.00% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 5.41% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 5.76% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 11.17% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.17% | 13.90% |
| b. Tier 1/Tier 2 UAL rate | (5.89%) | (8.68%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 5.41% | 5.34% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $36,370 | $0 | $36,370 |
| Tier 2 | 35,030 | 0 | 35,030 |
| Tier 1/Tier 2 valuation payroll | 71,400 | 0 | 71,400 |
| OPSRP valuation payroll | 34,800 | 0 | 34,800 |
| **Combined valuation payroll** | **$106,200** | **$0** | **$106,200** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 2 | 1 | 4 | 2 | 1 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 2 | 1 | 4 | 2 | 1 | 0 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 2 | 0 | N/A | 2 | 2 | 1 | N/A | 3 |
| Police & Fire | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Total | 3 | 0 | N/A | 3 | 3 | 1 | N/A | 4 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Police & Fire | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Total | 3 | 1 | 0 | 4 | 3 | 1 | 0 | 4 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| Total | 3 | 1 | 0 | 4 | 3 | 1 | 0 | 4 |
| **Grand Total Number of Members** | **10** | **4** | **1** | **15** | **11** | **4** | **0** | **15** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | 1 | | | | | | **1** |
| **50-54** | | | | | | | | | | |
| **55-59** | | 1 | | 1 | | | | | | **2** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | | **2** | | | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | 1 | 20 |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 1 | 944 |
| **65-69** | | |
| **70-74** | 1 | 135 |
| **75+** | 1 | 62 |
| **Total** | 4 | 290 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 2 |
| **55-59** | | |
| **60-64** | 1 | 3 |
| **65-69** | 1 | 1,137 |
| **70-74** | 1 | 24 |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 4 | 292 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Molalla/2290
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Molalla/2290

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Molalla -- #2290

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Molalla to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Molalla.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Molalla*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.58% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.18%) | (0.18%) | (0.18%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **10.55%** | **6.24%** | **8.97%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **11.14%** | **6.73%** | **9.46%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 98%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.40% | 10.40% |
| Minimum July 1, 2015 Rate | 7.40% | 4.40% |
| Maximum July 1, 2015 Rate | 13.40% | 16.40% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 0 |
| Amortization factor | 17.175 | 0.199 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.71% | (1.17%) | (1.17%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.09% | 0.51% | 0.51% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $10,652,928 | $8,092,951 | ($2,559,977) | 132% | $2,497,077 | (103%) |
| 12/31/2007 | 11,550,923 | 8,667,355 | (2,883,568) | 133% | 2,331,408 | (124%) |
| 12/31/2008 | 8,945,436 | 9,554,948 | 609,512 | 94% | 2,305,653 | 26% |
| 12/31/2009 | 10,301,439 | 10,259,527 | (41,912) | 100% | 2,398,909 | (2%) |
| 12/31/2010 | 11,077,946 | 11,043,166 | (34,780) | 100% | 2,775,435 | (1%) |
| 12/31/2011 | 11,117,542 | 11,296,702 | 179,160 | 98% | 2,470,181 | 7% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Molalla*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $179,160 | ($34,780) |
| Allocated pooled OPSRP UAL | 42,147 | 34,460 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 221,307 | (320) |
| Combined valuation payroll | 2,470,181 | 2,775,435 |
| Net pension UAL as a percentage of payroll | 9% | 0% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $63,991 | $99,856 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $164,014 | $192,684 |
| Tier 1/Tier 2 valuation payroll | 1,550,184 | 1,937,614 |
| Tier 1/Tier 2 pension normal cost rate | 10.58% | 9.94% |
| Tier 1/ Tier 2 Actuarial accrued liability | $11,296,702 | $11,043,166 |
| Actuarial asset value | 11,117,542 | 11,077,946 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 179,160 | (34,780) |
| Tier 1/ Tier 2 Funded status | 98% | 100% |
| Combined valuation payroll | $2,470,181 | $2,775,435 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 7% | (1%) |
| Tier 1/Tier 2 UAL rate | (0.18%) | (0.64%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 25 | 27 |
| Tier 1/Tier 2 dormant members | 16 | 16 |
| Tier 1/Tier 2 retirees and beneficiaries | 29 | 25 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 2,470,181 | 2,775,435 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $2,290,327 | $2,346,497 |
| 2. Employer reserves | 6,589,440 | 6,601,363 |
| 3. Benefits in force reserve | 2,237,775 | 2,130,086 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$11,117,542** | **$11,077,946** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $11,077,946 |
| 2. Regular employer contributions | 86,774 |
| 3. Benefit payments and expenses | (374,924) |
| 4. Adjustments[2] | (10,412) |
| 5. Interest credited | 338,158 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$11,117,542** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $23,639 | $36,846 |
| Tier 1 General Service | 15,255 | 14,553 |
| Tier 2 Police & Fire | 73,746 | 83,506 |
| Tier 2 General Service | 51,374 | 57,779 |
| **Total** | **$164,014** | **$192,684** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $164,014 | $164,014 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $1,098,909 | $1,227,086 |
| ▪ Tier 1 General Service | 2,931,169 | 2,644,376 |
| ▪ Tier 2 Police & Fire | 926,729 | 904,945 |
| ▪ Tier 2 General Service | 807,344 | 911,812 |
| ▪ **Total Active Members** | **$5,764,151** | **$5,688,219** |
| Dormant Members | 1,462,628 | 1,847,649 |
| Retired Members and Beneficiaries | 4,069,923 | 3,507,298 |
| **Total Actuarial Accrued Liability** | **$11,296,702** | **$11,043,166** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $11,296,702 | $11,296,702 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $11,296,702 | $11,043,166 |
| 2. Actuarial value of assets | 11,117,542 | 11,077,946 |
| 3. Unfunded accrued liability *(1. – 2.)* | 179,160 | (34,780) |
| 4. Funded percentage *(2. ÷ 1.)* | 98% | 100% |
| 5. Combined valuation payroll | $2,470,181 | $2,775,435 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 7% | (1%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($3,079,867) | ($253,814) | ($235,585) | ($3,061,638) | ($263,332) |
| December 31, 2009 | $3,055,136 | $233,380 | $234,476 | $3,056,232 | $242,132 |
| December 31, 2011 | N/A | N/A | N/A | $184,566 | $13,630 |
| **Total** | | | | **$179,160** | **($7,570)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $11,043,166 |
| b. Normal cost at December 31, 2010 | 192,684 |
| c. Benefit payments during 2011 | (372,466) |
| d. Interest at 8.0% to December 31, 2011 | 883,969 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 11,747,353 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 11,747,353 |
| 2. Actuarial accrued liability at December 31, 2011 | 11,296,702 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 450,651 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 11,077,946 |
| b. Contributions for 2011[1] | 86,774 |
| c. Benefit payments and expenses during 2011 | (374,924) |
| d. Interest at 8.0% to December 31, 2011 | 874,710 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 11,664,506 |
| 5. Actuarial value of assets at December 31, 2011 | 11,117,542 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (546,964) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($96,313)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($34,780)** |
| 2. Expected increase | 117,627 |
| 3. Liability (gain)/loss | (450,651) |
| 4. Asset (gain)/loss | 546,964 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$179,160** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $23,639 | $176,305 | 13.41% | $36,846 | $217,323 | 16.95% |
| Tier 1 General Service | 15,255 | 354,832 | 4.30% | 14,553 | 478,267 | 3.04% |
| Tier 2 Police & Fire | 73,746 | 557,518 | 13.23% | 83,506 | 643,644 | 12.97% |
| Tier 2 General Service | 51,374 | 461,529 | 11.13% | 57,779 | 598,380 | 9.66% |
| **Total** | **$164,014** | **$1,550,184** | **10.58%** | **$192,684** | **$1,937,614** | **9.94%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $179,160 | ($34,780) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (7,570) | (21,176) |
| 3. Combined valuation payroll | 2,470,181 | 2,775,435 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (0.31%) | (0.76%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.58% | 9.94% |
| b. Tier 1/Tier 2 UAL rate | (0.31%) | (0.76%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.40% | 9.30% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 98% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. | July 1, 2013 total pension rate, before adjustment | 10.40% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (0.31%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.31%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 10.40% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.58% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.58% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 10.40% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.58% | 9.94% |
| b. Tier 1/Tier 2 UAL rate | (0.31%) | (0.76%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 10.40% | 9.30% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $354,832 | $176,305 | $531,137 |
| Tier 2 | 461,529 | 557,518 | 1,019,047 |
| Tier 1/Tier 2 valuation payroll | 816,361 | 733,823 | 1,550,184 |
| OPSRP valuation payroll | 804,356 | 115,641 | 919,997 |
| **Combined valuation payroll** | **$1,620,717** | **$849,464** | **$2,470,181** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 6 | 10 | 37 | 53 | 7 | 11 | 34 | 52 |
| Police & Fire | 2 | 7 | 2 | 11 | 2 | 7 | 1 | 10 |
| Total | 8 | 17 | 39 | 64 | 9 | 18 | 35 | 62 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 8 | 2 | N/A | 10 | 7 | 6 | N/A | 13 |
| Police & Fire | 2 | 2 | N/A | 4 | 4 | 2 | N/A | 6 |
| Total | 10 | 4 | N/A | 14 | 11 | 8 | N/A | 19 |
| **Dormant Members** | | | | | | | | |
| General Service | 7 | 6 | 1 | 14 | 11 | 4 | 0 | 15 |
| Police & Fire | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 |
| Total | 10 | 6 | 1 | 17 | 12 | 4 | 0 | 16 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 17 | 3 | 0 | 20 | 15 | 1 | 0 | 16 |
| Police & Fire | 4 | 5 | 0 | 9 | 6 | 3 | 0 | 9 |
| Total | 21 | 8 | 0 | 29 | 21 | 4 | 0 | 25 |
| **Grand Total Number of Members** | **49** | **35** | **40** | **124** | **53** | **34** | **35** | **122** |

1 *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | 1 | | | | | | | **2** |
| **35-39** | | 1 | 4 | 1 | | | | | | **6** |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | 1 | 1 | 1 | | | | | | **3** |
| **50-54** | | | 2 | | | | 1 | | | **3** |
| **55-59** | | 1 | 2 | 1 | | 1 | 1 | | | **6** |
| **60-64** | | | 1 | 1 | | | | | | **2** |
| **65-69** | | | 1 | | | | 1 | | | **2** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **4** | **13** | **4** | | **1** | **3** | | | **25** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 1 | 3 |
| **30-34** | | |
| **35-39** | 1 | 57 |
| **40-44** | 2 | 3,407 |
| **45-49** | 4 | 1,735 |
| **50-54** | 3 | 969 |
| **55-59** | 3 | 600 |
| **60-64** | 1 | 6 |
| **65-69** | 1 | 32 |
| **70-74** | | |
| **75+** | | |
| **Total** | 16 | 1,160 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 5 | 1,114 |
| **60-64** | 5 | 734 |
| **65-69** | 9 | 989 |
| **70-74** | 7 | 950 |
| **75-79** | 2 | 1,532 |
| **80-84** | | |
| **85-89** | 1 | 675 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 29 | 984 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Mt Angel/2174
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Mt Angel/2174

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Mt Angel -- #2174

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Mt Angel to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Mt Angel.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Mt Angel*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.88% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 1.23% | 1.23% | 1.23% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **10.26%** | **7.65%** | **10.38%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.85%** | **8.14%** | **10.87%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 96%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.11% | 10.11% |
| Minimum July 1, 2015 Rate | 7.11% | 4.11% |
| Maximum July 1, 2015 Rate | 13.11% | 16.11% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.99% | 1.12% | 1.12% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.34% | 1.46% | 1.46% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $4,314,552 | $3,749,738 | ($564,814) | 115% | $697,185 | (81%) |
| 12/31/2007 | 4,829,585 | 3,996,812 | (832,773) | 121% | 685,789 | (121%) |
| 12/31/2008 | 3,684,050 | 4,162,510 | 478,460 | 89% | 818,818 | 58% |
| 12/31/2009 | 3,759,794 | 3,886,213 | 126,419 | 97% | 715,310 | 18% |
| 12/31/2010 | 4,098,119 | 3,915,133 | (182,986) | 105% | 634,125 | (29%) |
| 12/31/2011 | 4,075,365 | 4,266,957 | 191,592 | 96% | 814,389 | 24% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Mt Angel*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $191,592 | ($182,986) |
| Allocated pooled OPSRP UAL | 13,895 | 7,873 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 205,487 | (175,113) |
| Combined valuation payroll | 814,389 | 634,125 |
| Net pension UAL as a percentage of payroll | 25% | (28%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $21,097 | $22,815 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $37,616 | $61,873 |
| Tier 1/Tier 2 valuation payroll | 423,507 | 567,253 |
| Tier 1/Tier 2 pension normal cost rate | 8.88% | 10.91% |
| Tier 1/ Tier 2 Actuarial accrued liability | $4,266,957 | $3,915,133 |
| Actuarial asset value | 4,075,365 | 4,098,119 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 191,592 | (182,986) |
| Tier 1/ Tier 2 Funded status | 96% | 105% |
| Combined valuation payroll | $814,389 | $634,125 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 24% | (29%) |
| Tier 1/Tier 2 UAL rate | 1.23% | (2.79%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 8 | 9 |
| Tier 1/Tier 2 dormant members | 21 | 20 |
| Tier 1/Tier 2 retirees and beneficiaries | 43 | 38 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 814,389 | 634,125 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $770,286 | $741,208 |
| 2. Employer reserves | 2,180,652 | 2,250,943 |
| 3. Benefits in force reserve | 1,124,427 | 1,105,968 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$4,075,365** | **$4,098,119** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $4,098,119 |
| 2. | Regular employer contributions | 29,822 |
| 3. | Benefit payments and expenses | (188,390) |
| 4. | Adjustments[2] | 10,113 |
| 5. | Interest credited | 125,701 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$4,075,365** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $225 | $470 |
| Tier 1 General Service | 15,788 | 19,609 |
| Tier 2 Police & Fire | 11,014 | 25,305 |
| Tier 2 General Service | 10,589 | 16,489 |
| **Total** | **$37,616** | **$61,873** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $37,616 | $37,616 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $588,925 | $582,997 |
| ▪ Tier 1 General Service | 649,692 | 577,746 |
| ▪ Tier 2 Police & Fire | 290,872 | 332,985 |
| ▪ Tier 2 General Service | 353,780 | 302,923 |
| ▪ **Total Active Members** | **$1,883,269** | **$1,796,651** |
| Dormant Members | 338,652 | 297,448 |
| Retired Members and Beneficiaries | 2,045,036 | 1,821,034 |
| **Total Actuarial Accrued Liability** | **$4,266,957** | **$3,915,133** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $4,266,957 | $4,266,957 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $4,266,957 | $3,915,133 |
| 2. Actuarial value of assets | 4,075,365 | 4,098,119 |
| 3. Unfunded accrued liability *(1. – 2.)* | 191,592 | (182,986) |
| 4. Funded percentage *(2. ÷ 1.)* | 96% | 105% |
| 5. Combined valuation payroll | $814,389 | $634,125 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 24% | (29%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($879,424) | ($72,475) | ($67,269) | ($874,218) | ($75,193) |
| December 31, 2009 | $1,011,166 | $77,242 | $77,605 | $1,011,529 | $80,139 |
| December 31, 2011 | N/A | N/A | N/A | $54,281 | $4,009 |
| **Total** | | | | **$191,592** | **$8,955** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,915,133 |
| b. Normal cost at December 31, 2010 | 61,873 |
| c. Benefit payments during 2011 | (187,155) |
| d. Interest at 8.0% to December 31, 2011 | 310,674 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 4,100,525 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 4,100,525 |
| 2. Actuarial accrued liability at December 31, 2011 | 4,266,957 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (166,432) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 4,098,119 |
| b. Contributions for 2011[1] | 29,822 |
| c. Benefit payments and expenses during 2011 | (188,390) |
| d. Interest at 8.0% to December 31, 2011 | 321,507 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 4,261,058 |
| 5. Actuarial value of assets at December 31, 2011 | 4,075,365 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (185,693) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($352,125)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($182,986)** |
| 2. Expected increase | 22,453 |
| 3. Liability (gain)/loss | 166,432 |
| 4. Asset (gain)/loss | 185,693 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$191,592** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $225 | $1,047 | 21.49% | $470 | $3,574 | 13.15% |
| Tier 1 General Service | 15,788 | 230,585 | 6.85% | 19,609 | 243,132 | 8.07% |
| Tier 2 Police & Fire | 11,014 | 75,290 | 14.63% | 25,305 | 146,532 | 17.27% |
| Tier 2 General Service | 10,589 | 116,585 | 9.08% | 16,489 | 174,015 | 9.48% |
| **Total** | **$37,616** | **$423,507** | **8.88%** | **$61,873** | **$567,253** | **10.91%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $191,592 | ($182,986) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 8,955 | (18,476) |
| 3. Combined valuation payroll | 814,389 | 634,125 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 1.10% | (2.91%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.88% | 10.91% |
| b. Tier 1/Tier 2 UAL rate | 1.10% | (2.91%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.11% | 8.12% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.37% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.37% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.07% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 96% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.37% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.37% |
| 7. July 1, 2013 total pension rate, before adjustment | 10.11% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 1.10% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.10% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 10.11% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.88% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.88% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 10.11% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.88% | 10.91% |
| b. Tier 1/Tier 2 UAL rate | 1.10% | (2.91%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 10.11% | 8.12% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $230,585 | $1,047 | $231,632 |
| Tier 2 | 116,585 | 75,290 | 191,875 |
| Tier 1/Tier 2 valuation payroll | 347,170 | 76,337 | 423,507 |
| OPSRP valuation payroll | 144,148 | 246,734 | 390,882 |
| **Combined valuation payroll** | **$491,318** | **$323,071** | **$814,389** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 5 | 2 | 5 | 12 | 4 | 3 | 4 | 11 |
| Police & Fire | 0 | 1 | 5 | 6 | 0 | 2 | 0 | 2 |
| Total | 5 | 3 | 10 | 18 | 4 | 5 | 4 | 13 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 12 | 14 | N/A | 26 | 15 | 15 | N/A | 30 |
| Police & Fire | 39 | 38 | N/A | 77 | 49 | 52 | N/A | 101 |
| Total | 51 | 52 | N/A | 103 | 64 | 67 | N/A | 131 |
| **Dormant Members** | | | | | | | | |
| General Service | 6 | 3 | 0 | 9 | 10 | 6 | 0 | 16 |
| Police & Fire | 9 | 3 | 0 | 12 | 3 | 1 | 0 | 4 |
| Total | 15 | 6 | 0 | 21 | 13 | 7 | 0 | 20 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 9 | 1 | 0 | 10 | 9 | 0 | 0 | 9 |
| Police & Fire | 29 | 4 | 0 | 33 | 28 | 1 | 0 | 29 |
| Total | 38 | 5 | 0 | 43 | 37 | 1 | 0 | 38 |
| **Grand Total Number of Members** | **109** | **66** | **10** | **185** | **118** | **80** | **4** | **202** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 1 | | | | | | | **1** |
| **40-44** | | | | 1 | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | 1 | | | | | | | **1** |
| **55-59** | | 1 | | 1 | | 1 | | | | **3** |
| **60-64** | | | | 2 | | | | | | **2** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **2** | **4** | | **1** | | | | **8** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 1 | 4 |
| **35-39** | 2 | 409 |
| **40-44** | | |
| **45-49** | 4 | 165 |
| **50-54** | 4 | 250 |
| **55-59** | 6 | 74 |
| **60-64** | 1 | 907 |
| **65-69** | 2 | 217 |
| **70-74** | | |
| **75+** | 1 | 464 |
| **Total** | 21 | 225 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 2 | 1 |
| **45-49** | | |
| **50-54** | 2 | 2 |
| **55-59** | 13 | 126 |
| **60-64** | 6 | 463 |
| **65-69** | 11 | 486 |
| **70-74** | 5 | 313 |
| **75-79** | 3 | 282 |
| **80-84** | 1 | 2,417 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 43 | 340 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Ontario/2118
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Ontario/2118

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Ontario/2118

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

City of Ontario -- #2118

### Secondary Employers

2762 Ontario Rural Fire Protection District

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Ontario to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Ontario.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Ontario*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.83% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 11.53% | 11.53% | 11.53% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **22.51%** | **17.95%** | **20.68%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **23.10%** | **18.44%** | **21.17%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 75%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 22.36% | 22.36% |
| Minimum July 1, 2015 Rate | 17.89% | 13.42% |
| Maximum July 1, 2015 Rate | 26.83% | 31.30% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 19.01% | 9.44% | 9.44% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 22.42% | 11.59% | 11.59% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $29,431,459 | $30,846,198 | $1,414,739 | 95% | $4,507,111 | 31% |
| 12/31/2007 | 30,694,923 | 31,568,278 | 873,355 | 97% | 4,215,245 | 21% |
| 12/31/2008 | 23,170,974 | 32,216,417 | 9,045,443 | 72% | 4,399,612 | 206% |
| 12/31/2009 | 25,814,910 | 33,286,524 | 7,471,614 | 78% | 4,650,789 | 161% |
| 12/31/2010 | 27,876,104 | 34,747,117 | 6,871,013 | 80% | 4,869,659 | 141% |
| 12/31/2011 | 27,279,942 | 36,378,159 | 9,098,217 | 75% | 4,606,302 | 198% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Ontario*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $9,098,217 | $6,871,013 |
| Allocated pooled OPSRP UAL | 78,594 | 60,463 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 9,176,811 | 6,931,476 |
| Combined valuation payroll | 4,606,302 | 4,869,659 |
| Net pension UAL as a percentage of payroll | 199% | 142% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $119,329 | $175,203 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $351,047 | $341,833 |
| Tier 1/Tier 2 valuation payroll | 3,242,300 | 3,531,695 |
| Tier 1/Tier 2 pension normal cost rate | 10.83% | 9.68% |
| Tier 1/ Tier 2 Actuarial accrued liability | $36,378,159 | $34,747,117 |
| Actuarial asset value | 27,279,942 | 27,876,104 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 9,098,217 | 6,871,013 |
| Tier 1/ Tier 2 Funded status | 75% | 80% |
| Combined valuation payroll | $4,606,302 | $4,869,659 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 198% | 141% |
| Tier 1/Tier 2 UAL rate | 11.53% | 10.95% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 57 | 63 |
| Tier 1/Tier 2 dormant members | 37 | 36 |
| Tier 1/Tier 2 retirees and beneficiaries | 92 | 84 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 4,606,302 | 4,869,659 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $4,668,532 | $5,484,485 |
| 2. Employer reserves | 10,505,079 | 11,024,701 |
| 3. Benefits in force reserve | 12,106,331 | 11,366,918 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$27,279,942** | **$27,876,104** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $27,876,104 |
| 2. | Regular employer contributions | 594,942 |
| 3. | Benefit payments and expenses | (2,028,332) |
| 4. | Adjustments[2] | 25,127 |
| 5. | Interest credited | 812,101 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$27,279,942** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $146,716 | $137,119 |
| Tier 1 General Service | 21,602 | 25,317 |
| Tier 2 Police & Fire | 103,077 | 100,237 |
| Tier 2 General Service | 79,652 | 79,160 |
| **Total** | **$351,047** | **$341,833** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $351,047 | $351,047 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $5,383,866 | $5,866,163 |
| ▪ Tier 1 General Service | 4,491,491 | 5,176,003 |
| ▪ Tier 2 Police & Fire | 1,026,449 | 922,866 |
| ▪ Tier 2 General Service | 1,130,646 | 1,008,100 |
| ▪ **Total Active Members** | **$12,032,452** | **$12,973,132** |
| Dormant Members | 2,327,485 | 3,057,759 |
| Retired Members and Beneficiaries | 22,018,222 | 18,716,226 |
| **Total Actuarial Accrued Liability** | **$36,378,159** | **$34,747,117** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $36,378,159 | $36,378,159 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $36,378,159 | $34,747,117 |
| 2. Actuarial value of assets | 27,279,942 | 27,876,104 |
| 3. Unfunded accrued liability *(1. – 2.)* | 9,098,217 | 6,871,013 |
| 4. Funded percentage *(2. ÷ 1.)* | 75% | 80% |
| 5. Combined valuation payroll | $4,606,302 | $4,869,659 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 198% | 141% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $177,420 | $14,621 | $13,571 | $176,370 | $15,169 |
| December 31, 2009 | $7,315,661 | $558,840 | $561,464 | $7,318,285 | $579,797 |
| December 31, 2011 | N/A | N/A | N/A | $1,603,562 | $118,423 |
| **Total** | | | | **$9,098,217** | **$713,389** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $34,747,117 |
| b. Normal cost at December 31, 2010 | 341,833 |
| c. Benefit payments during 2011 | (2,015,037) |
| d. Interest at 8.0% to December 31, 2011 | 2,726,515 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 35,800,428 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 35,800,428 |
| 2. Actuarial accrued liability at December 31, 2011 | 36,378,159 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (577,731) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 27,876,104 |
| b. Contributions for 2011[1] | 594,942 |
| c. Benefit payments and expenses during 2011 | (2,028,332) |
| d. Interest at 8.0% to December 31, 2011 | 2,172,753 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 28,615,467 |
| 5. Actuarial value of assets at December 31, 2011 | 27,279,942 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,335,525) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($1,913,256)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$6,871,013** |
| 2. Expected increase | 313,948 |
| 3. Liability (gain)/loss | 577,731 |
| 4. Asset (gain)/loss | 1,335,525 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$9,098,217** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $146,716 | $971,782 | 15.10% | $137,119 | $1,028,542 | 13.33% |
| Tier 1 General Service | 21,602 | 699,510 | 3.09% | 25,317 | 870,517 | 2.91% |
| Tier 2 Police & Fire | 103,077 | 716,312 | 14.39% | 100,237 | 717,124 | 13.98% |
| Tier 2 General Service | 79,652 | 854,696 | 9.32% | 79,160 | 915,512 | 8.65% |
| **Total** | **$351,047** | **$3,242,300** | **10.83%** | **$341,833** | **$3,531,695** | **9.68%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $9,098,217 | $6,871,013 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 713,389 | 527,521 |
| 3. Combined valuation payroll | 4,606,302 | 4,869,659 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 15.49% | 10.83% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.83% | 9.68% |
| b. Tier 1/Tier 2 UAL rate | 15.49% | 10.83% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 26.45% | 20.63% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 17.20% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 17.20% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.44% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.44% |
| c. Funded percentage | 75% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 5.16% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 12.04% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 22.36% |
| 7. July 1, 2013 total pension rate, before adjustment | 26.45% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (4.09%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 15.49% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 11.40% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 22.36% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.83% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.83% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 22.36% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.83% | 9.68% |
| b. Tier 1/Tier 2 UAL rate | 11.40% | 10.83% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 22.36% | 20.63% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $699,510 | $971,782 | $1,671,292 |
| Tier 2 | 854,696 | 716,312 | 1,571,008 |
| Tier 1/Tier 2 valuation payroll | 1,554,206 | 1,688,094 | 3,242,300 |
| OPSRP valuation payroll | 1,009,202 | 354,800 | 1,364,002 |
| **Combined valuation payroll** | **$2,563,408** | **$2,042,894** | **$4,606,302** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 13 | 18 | 24 | 55 | 16 | 20 | 28 | 64 |
| Police & Fire | 14 | 12 | 8 | 34 | 15 | 12 | 10 | 37 |
| Total | 27 | 30 | 32 | 89 | 31 | 32 | 38 | 101 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 20 | 7 | N/A | 27 | 23 | 8 | N/A | 31 |
| Police & Fire | 13 | 6 | N/A | 19 | 15 | 7 | N/A | 22 |
| Total | 33 | 13 | N/A | 46 | 38 | 15 | N/A | 53 |
| **Dormant Members** | | | | | | | | |
| General Service | 16 | 15 | 0 | 31 | 17 | 14 | 1 | 32 |
| Police & Fire | 3 | 3 | 1 | 7 | 3 | 2 | 1 | 6 |
| Total | 19 | 18 | 1 | 38 | 20 | 16 | 2 | 38 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 61 | 5 | 0 | 66 | 57 | 4 | 0 | 61 |
| Police & Fire | 26 | 0 | 0 | 26 | 23 | 0 | 0 | 23 |
| Total | 87 | 5 | 0 | 92 | 80 | 4 | 0 | 84 |
| **Grand Total Number of Members** | **166** | **66** | **33** | **265** | **169** | **67** | **40** | **276** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 2 | 2 | | | | | | | **4** |
| **35-39** | | 4 | 4 | 1 | | | | | | **9** |
| **40-44** | | 1 | 3 | 5 | 1 | | | | | **10** |
| **45-49** | | 2 | 2 | 1 | 4 | 2 | | | | **11** |
| **50-54** | | 2 | 4 | 1 | 3 | 1 | | | | **11** |
| **55-59** | | 2 | | 3 | 2 | 1 | 1 | | | **9** |
| **60-64** | | | 2 | | 1 | | | | | **3** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **13** | **17** | **11** | **11** | **4** | **1** | | | **57** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 1 | |
| **30-34** | 1 | 468 |
| **35-39** | | |
| **40-44** | 7 | 872 |
| **45-49** | 3 | 1,517 |
| **50-54** | 12 | 820 |
| **55-59** | 5 | 196 |
| **60-64** | 5 | 448 |
| **65-69** | 2 | 1,288 |
| **70-74** | | |
| **75+** | 1 | 240 |
| **Total** | 37 | 729 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | 2 | 43 |
| **50-54** | 3 | 2,562 |
| **55-59** | 10 | 1,536 |
| **60-64** | 20 | 2,511 |
| **65-69** | 19 | 1,386 |
| **70-74** | 15 | 1,630 |
| **75-79** | 12 | 1,622 |
| **80-84** | 7 | 857 |
| **85-89** | 2 | 768 |
| **90-94** | 1 | 358 |
| **95-99** | 1 | 1,201 |
| **100+** | | |
| **Total** | 92 | 1,660 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Powers/2215
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Powers/2215

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Powers/2215

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Powers -- #2215

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Powers to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Powers.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Powers*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 10.82% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.50%) | (2.50%) | (2.50%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.47%** | **3.92%** | **6.65%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **9.06%** | **4.41%** | **7.14%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 201%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.32% | 8.32% |
| Minimum July 1, 2015 Rate | 5.32% | 2.32% |
| Maximum July 1, 2015 Rate | 11.32% | 14.32% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 3.10% | (7.04%) | (7.04%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.20% | (4.62%) | (4.62%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $76,294 | $59,406 | ($16,888) | 128% | $9,139 | (185%) |
| 12/31/2007 | 81,826 | 39,307 | (42,519) | 208% | 0 | 0% |
| 12/31/2008 | 63,327 | 39,247 | (24,080) | 161% | 38,835 | (62%) |
| 12/31/2009 | 87,332 | 38,915 | (48,417) | 224% | 39,539 | (122%) |
| 12/31/2010 | 102,721 | 45,009 | (57,712) | 228% | 40,511 | (142%) |
| 12/31/2011 | 106,075 | 52,769 | (53,306) | 201% | 65,891 | (81%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Powers*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($53,306) | ($57,712) |
| Allocated pooled OPSRP UAL | 1,124 | 503 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (52,182) | (57,209) |
| Combined valuation payroll | 65,891 | 40,511 |
| Net pension UAL as a percentage of payroll | (79%) | (141%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,707 | $1,458 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $0 | $0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| Tier 1/ Tier 2 Actuarial accrued liability | $52,769 | $45,009 |
| Actuarial asset value | 106,075 | 102,721 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (53,306) | (57,712) |
| Tier 1/ Tier 2 Funded status | 201% | 228% |
| Combined valuation payroll | $65,891 | $40,511 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (81%) | (142%) |
| Tier 1/Tier 2 UAL rate | (2.50%) | (1.98%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 65,891 | 40,511 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $2,340 | $4,443 |
| 2. Employer reserves | 81,757 | 77,681 |
| 3. Benefits in force reserve | 21,978 | 20,598 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$106,075** | **$102,721** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $102,721 |
| 2. | Regular employer contributions | 4,795 |
| 3. | Benefit payments and expenses | (3,682) |
| 4. | Adjustments [2] | (221) |
| 5. | Interest credited | 2,461 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$106,075** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $6,552 | $5,335 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$6,552** | **$5,335** |
| Dormant Members | 6,246 | 5,758 |
| Retired Members and Beneficiaries | 39,971 | 33,916 |
| **Total Actuarial Accrued Liability** | **$52,769** | **$45,009** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $52,769 | $52,769 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $52,769 | $45,009 |
| 2. Actuarial value of assets | 106,075 | 102,721 |
| 3. Unfunded accrued liability *(1. – 2.)* | (53,306) | (57,712) |
| 4. Funded percentage *(2. ÷ 1.)* | 201% | 228% |
| 5. Combined valuation payroll | $65,891 | $40,511 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (81%) | (142%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($61,218) | ($5,044) | ($4,683) | ($60,857) | ($5,233) |
| December 31, 2009 | $12,999 | $993 | $998 | $13,004 | $1,030 |
| December 31, 2011 | N/A | N/A | N/A | ($5,453) | ($403) |
| **Total** | | | | **($53,306)** | **($4,606)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $45,009 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | (3,658) |
| d. Interest at 8.0% to December 31, 2011 | 3,454 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 44,805 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 44,805 |
| 2. Actuarial accrued liability at December 31, 2011 | 52,769 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (7,964) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 102,721 |
| b. Contributions for 2011[1] | 4,795 |
| c. Benefit payments and expenses during 2011 | (3,682) |
| d. Interest at 8.0% to December 31, 2011 | 8,262 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 112,096 |
| 5. Actuarial value of assets at December 31, 2011 | 106,075 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (6,022) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($13,986)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($57,712)** |
| 2. Expected increase | (9,580) |
| 3. Liability (gain)/loss | 7,964 |
| 4. Asset (gain)/loss | 6,022 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($53,306)** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$0** | **$0** | **10.82%** | **$0** | **$0** | **10.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($53,306) | ($57,712) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (4,606) | (4,752) |
| 3. Combined valuation payroll | 65,891 | 40,511 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (6.99%) | (11.73%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | (6.99%) | (11.73%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 3.96% | (1.31%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 14.32% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.32% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.86% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 201% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.32% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 20.32% |
| 7. July 1, 2013 total pension rate, before adjustment | 3.96% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 4.36% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (6.99%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.63%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.32% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.82% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.82% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.32% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | (2.63%) | (2.10%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 8.32% | 8.32% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 | 0 |
| OPSRP valuation payroll | 0 | 65,891 | 65,891 |
| **Combined valuation payroll** | **$0** | **$65,891** | **$65,891** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 |
| Total | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 4 | 0 | 0 | 4 | 3 | 0 | 0 | 3 |
| Total | 5 | 0 | 0 | 5 | 4 | 0 | 0 | 4 |
| **Grand Total Number of Members** | **6** | **1** | **2** | **9** | **6** | **0** | **1** | **7** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | 1 | 56 |
| 75+ | | |
| Total | 1 | 56 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 3 | 53 |
| 65-69 | 1 | 72 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | 1 | 91 |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 5 | 64 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Prairie City/2218
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Prairie City/2218

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Prairie City -- #2218

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Prairie City to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Prairie City.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Prairie City*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.16% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.55% | 2.55% | 2.55% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.86%** | **8.97%** | **11.70%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.45%** | **9.46%** | **12.19%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 93%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.71% | 11.71% |
| Minimum July 1, 2015 Rate | 8.71% | 5.71% |
| Maximum July 1, 2015 Rate | 14.71% | 17.71% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.82% | 3.81% | 3.81% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.57% | 3.41% | 3.41% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,519,158 | $1,231,670 | ($287,488) | 123% | $185,610 | (155%) |
| 12/31/2007 | 1,659,595 | 1,314,834 | (344,761) | 126% | 204,684 | (168%) |
| 12/31/2008 | 1,244,294 | 1,465,673 | 221,379 | 85% | 136,832 | 162% |
| 12/31/2009 | 1,431,201 | 1,545,579 | 114,378 | 93% | 178,976 | 64% |
| 12/31/2010 | 1,316,020 | 1,342,502 | 26,482 | 98% | 186,224 | 14% |
| 12/31/2011 | 1,335,696 | 1,442,081 | 106,385 | 93% | 186,382 | 57% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Prairie City*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $106,385 | $26,482 |
| Allocated pooled OPSRP UAL | 3,180 | 2,312 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 109,565 | 28,794 |
| Combined valuation payroll | 186,382 | 186,224 |
| Net pension UAL as a percentage of payroll | 59% | 15% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $4,828 | $6,700 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $17,068 | $16,501 |
| Tier 1/Tier 2 valuation payroll | 186,382 | 186,224 |
| Tier 1/Tier 2 pension normal cost rate | 9.16% | 8.86% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,442,081 | $1,342,502 |
| Actuarial asset value | 1,335,696 | 1,316,020 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 106,385 | 26,482 |
| Tier 1/ Tier 2 Funded status | 93% | 98% |
| Combined valuation payroll | $186,382 | $186,224 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 57% | 14% |
| Tier 1/Tier 2 UAL rate | 2.55% | 0.07% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 5 | 5 |
| Tier 1/Tier 2 dormant members | 1 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 8 | 7 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 186,382 | 186,224 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $337,464 | $338,161 |
| 2. Employer reserves | 797,333 | 783,304 |
| 3. Benefits in force reserve | 200,900 | 194,556 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,335,696** | **$1,316,020** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,316,020 |
| 2. Regular employer contributions | 13,263 |
| 3. Benefit payments and expenses | (33,659) |
| 4. Adjustments[2] | (1,423) |
| 5. Interest credited | 41,495 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,335,696** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 6,562 | 5,894 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 10,506 | 10,607 |
| **Total** | **$17,068** | **$16,501** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $17,068 | $17,068 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 280,460 | 255,731 |
| ▪ Tier 2 Police & Fire | 96,483 | 89,253 |
| ▪ Tier 2 General Service | 104,331 | 90,970 |
| ▪ **Total Active Members** | **$481,274** | **$435,954** |
| Dormant Members | 595,424 | 586,202 |
| Retired Members and Beneficiaries | 365,383 | 320,346 |
| **Total Actuarial Accrued Liability** | **$1,442,081** | **$1,342,502** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,442,081 | $1,442,081 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,442,081 | $1,342,502 |
| 2. Actuarial value of assets | 1,335,696 | 1,316,020 |
| 3. Unfunded accrued liability *(1. – 2.)* | 106,385 | 26,482 |
| 4. Funded percentage *(2. ÷ 1.)* | 93% | 98% |
| 5. Combined valuation payroll | $186,382 | $186,224 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 57% | 14% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($390,472) | ($32,180) | ($29,868) | ($388,160) | ($33,387) |
| December 31, 2009 | $507,389 | $38,759 | $38,941 | $507,571 | $40,212 |
| December 31, 2011 | N/A | N/A | N/A | ($13,026) | ($962) |
| **Total** | | | | **$106,385** | **$5,863** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,342,502 |
| b. Normal cost at December 31, 2010 | 16,501 |
| c. Benefit payments during 2011 | (33,439) |
| d. Interest at 8.0% to December 31, 2011 | 107,383 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,432,947 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,432,947 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,442,081 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (9,134) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,316,020 |
| b. Contributions for 2011[1] | 13,263 |
| c. Benefit payments and expenses during 2011 | (33,659) |
| d. Interest at 8.0% to December 31, 2011 | 104,466 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,400,090 |
| 5. Actuarial value of assets at December 31, 2011 | 1,335,696 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (64,393) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($73,527)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$26,482** |
| 2. Expected increase | 6,376 |
| 3. Liability (gain)/loss | 9,134 |
| 4. Asset (gain)/loss | 64,393 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$106,385** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 6,562 | 77,064 | 8.52% | 5,894 | 70,675 | 8.34% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 10,506 | 109,318 | 9.61% | 10,607 | 115,549 | 9.18% |
| **Total** | **$17,068** | **$186,382** | **9.16%** | **$16,501** | **$186,224** | **8.86%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $106,385 | $26,482 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 5,863 | (100) |
| 3. Combined valuation payroll | 186,382 | 186,224 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.15% | (0.05%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.16% | 8.86% |
| b. Tier 1/Tier 2 UAL rate | 3.15% | (0.05%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 12.44% | 8.93% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 93% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 12.44% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.73%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.15% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.42% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.71% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.16% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.16% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.16% | 8.86% |
| b. Tier 1/Tier 2 UAL rate | 2.42% | (0.05%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 11.71% | 8.93% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $77,064 | $0 | $77,064 |
| Tier 2 | 109,318 | 0 | 109,318 |
| Tier 1/Tier 2 valuation payroll | 186,382 | 0 | 186,382 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$186,382** | **$0** | **$186,382** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 3 | 0 | 5 | 2 | 3 | 0 | 5 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 3 | 0 | 5 | 2 | 3 | 0 | 5 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 2 | N/A | 2 | 0 | 3 | N/A | 3 |
| Total | 0 | 2 | N/A | 2 | 0 | 3 | N/A | 3 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| Police & Fire | 3 | 1 | 0 | 4 | 2 | 1 | 0 | 3 |
| Total | 7 | 1 | 0 | 8 | 6 | 1 | 0 | 7 |
| **Grand Total Number of Members** | **10** | **6** | **0** | **16** | **10** | **7** | **0** | **17** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | 1 | | | | | | | **1** |
| **60-64** | | | | | 1 | 1 | | | | **2** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **2** | | **1** | **1** | | | | **5** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 4,102 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 4,102 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 240 |
| **60-64** | 3 | 364 |
| **65-69** | | |
| **70-74** | 1 | 267 |
| **75-79** | 1 | 240 |
| **80-84** | | |
| **85-89** | 2 | 520 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 8 | 360 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Prineville/2146
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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September 28, 2012
City of Prineville/2146

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Prineville -- #2146

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Prineville to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Prineville.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Prineville*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.01% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 1.42% | 1.42% | 1.42% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.58%** | **7.84%** | **10.57%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.17%** | **8.33%** | **11.06%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 81%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.43% | 13.43% |
| Minimum July 1, 2015 Rate | 10.43% | 7.43% |
| Maximum July 1, 2015 Rate | 16.43% | 19.43% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.82% | 4.47% | 4.47% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.46% | 5.45% | 5.45% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $14,758,099 | $13,499,850 | ($1,258,250) | 109% | $3,236,270 | (39%) |
| 12/31/2007 | 15,921,543 | 14,497,823 | (1,423,720) | 110% | 3,259,984 | (44%) |
| 12/31/2008 | 11,841,127 | 14,892,263 | 3,051,136 | 80% | 3,483,751 | 88% |
| 12/31/2009 | 13,028,663 | 15,500,618 | 2,471,955 | 84% | 3,287,676 | 75% |
| 12/31/2010 | 14,080,970 | 16,407,260 | 2,326,290 | 86% | 3,605,853 | 65% |
| 12/31/2011 | 13,842,964 | 17,171,719 | 3,328,755 | 81% | 3,614,154 | 92% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Prineville*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $3,328,755 | $2,326,290 |
| Allocated pooled OPSRP UAL | 61,666 | 44,771 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 3,390,421 | 2,371,061 |
| Combined valuation payroll | 3,614,154 | 3,605,853 |
| Net pension UAL as a percentage of payroll | 94% | 66% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $93,626 | $129,733 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $232,795 | $240,824 |
| Tier 1/Tier 2 valuation payroll | 1,938,533 | 2,047,253 |
| Tier 1/Tier 2 pension normal cost rate | 12.01% | 11.76% |
| Tier 1/ Tier 2 Actuarial accrued liability | $17,171,719 | $16,407,260 |
| Actuarial asset value | 13,842,964 | 14,080,970 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 3,328,755 | 2,326,290 |
| Tier 1/ Tier 2 Funded status | 81% | 86% |
| Combined valuation payroll | $3,614,154 | $3,605,853 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 92% | 65% |
| Tier 1/Tier 2 UAL rate | 1.42% | 1.67% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 32 | 35 |
| Tier 1/Tier 2 dormant members | 23 | 22 |
| Tier 1/Tier 2 retirees and beneficiaries | 49 | 44 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 3,614,154 | 3,605,853 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $2,714,161 | $2,978,717 |
| 2. Employer reserves | 6,468,217 | 6,791,678 |
| 3. Benefits in force reserve | 4,660,586 | 4,310,575 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$13,842,964** | **$14,080,970** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $14,080,970 |
| 2. | Regular employer contributions | 162,409 |
| 3. | Benefit payments and expenses | (780,849) |
| 4. | Adjustments[2] | (39,970) |
| 5. | Interest credited | 420,404 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$13,842,964** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $68,512 | $73,431 |
| Tier 1 General Service | 47,728 | 45,261 |
| Tier 2 Police & Fire | 52,891 | 49,095 |
| Tier 2 General Service | 63,664 | 73,037 |
| **Total** | **$232,795** | **$240,824** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $232,795 | $232,795 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $3,258,192 | $3,784,204 |
| ▪ Tier 1 General Service | 3,151,389 | 3,081,691 |
| ▪ Tier 2 Police & Fire | 1,037,120 | 904,801 |
| ▪ Tier 2 General Service | 688,528 | 724,998 |
| ▪ **Total Active Members** | **$8,135,229** | **$8,495,694** |
| Dormant Members | 560,113 | 813,979 |
| Retired Members and Beneficiaries | 8,476,377 | 7,097,587 |
| **Total Actuarial Accrued Liability** | **$17,171,719** | **$16,407,260** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $17,171,719 | $17,171,719 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $17,171,719 | $16,407,260 |
| 2. Actuarial value of assets | 13,842,964 | 14,080,970 |
| 3. Unfunded accrued liability *(1. – 2.)* | 3,328,755 | 2,326,290 |
| 4. Funded percentage *(2. ÷ 1.)* | 81% | 86% |
| 5. Combined valuation payroll | $3,614,154 | $3,605,853 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 92% | 65% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,657,164) | ($136,569) | ($126,760) | ($1,647,355) | ($141,690) |
| December 31, 2009 | $4,145,865 | $316,700 | $318,188 | $4,147,353 | $328,576 |
| December 31, 2011 | N/A | N/A | N/A | $828,757 | $61,204 |
| **Total** | | | | **$3,328,755** | **$248,090** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $16,407,260 |
| b. Normal cost at December 31, 2010 | 240,824 |
| c. Benefit payments during 2011 | (775,731) |
| d. Interest at 8.0% to December 31, 2011 | 1,300,817 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 17,173,170 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 17,173,170 |
| 2. Actuarial accrued liability at December 31, 2011 | 17,171,719 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 1,451 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 14,080,970 |
| b. Contributions for 2011[1] | 162,409 |
| c. Benefit payments and expenses during 2011 | (780,849) |
| d. Interest at 8.0% to December 31, 2011 | 1,101,740 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 14,564,270 |
| 5. Actuarial value of assets at December 31, 2011 | 13,842,964 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (721,306) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($719,855)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,326,290** |
| 2. Expected increase | 282,610 |
| 3. Liability (gain)/loss | (1,451) |
| 4. Asset (gain)/loss | 721,306 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$3,328,755** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $68,512 | $312,460 | 21.93% | $73,431 | $365,621 | 20.08% |
| Tier 1 General Service | 47,728 | 684,902 | 6.97% | 45,261 | 665,419 | 6.80% |
| Tier 2 Police & Fire | 52,891 | 302,909 | 17.46% | 49,095 | 289,927 | 16.93% |
| Tier 2 General Service | 63,664 | 638,262 | 9.97% | 73,037 | 726,286 | 10.06% |
| **Total** | **$232,795** | **$1,938,533** | **12.01%** | **$240,824** | **$2,047,253** | **11.76%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $3,328,755 | $2,326,290 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 248,090 | 168,137 |
| 3. Combined valuation payroll | 3,614,154 | 3,605,853 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 6.86% | 4.66% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.01% | 11.76% |
| b. Tier 1/Tier 2 UAL rate | 6.86% | 4.66% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 19.00% | 16.54% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 10.43% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.43% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.09% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 81% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.43% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.43% |
| 7. | July 1, 2013 total pension rate, before adjustment | 19.00% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (5.57%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 6.86% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.29% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.43% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.01% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.01% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.43% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.01% | 11.76% |
| b. Tier 1/Tier 2 UAL rate | 1.29% | 1.55% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 13.43% | 13.43% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $684,902 | $312,460 | $997,362 |
| Tier 2 | 638,262 | 302,909 | 941,171 |
| Tier 1/Tier 2 valuation payroll | 1,323,164 | 615,369 | 1,938,533 |
| OPSRP valuation payroll | 1,114,947 | 560,674 | 1,675,621 |
| **Combined valuation payroll** | **$2,438,111** | **$1,176,043** | **$3,614,154** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 12 | 12 | 27 | 51 | 12 | 15 | 34 | 61 |
| Police & Fire | 4 | 4 | 9 | 17 | 4 | 4 | 10 | 18 |
| Total | 16 | 16 | 36 | 68 | 16 | 19 | 44 | 79 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 6 | 5 | N/A | 11 | 10 | 8 | N/A | 18 |
| Police & Fire | 12 | 10 | N/A | 22 | 14 | 12 | N/A | 26 |
| Total | 18 | 15 | N/A | 33 | 24 | 20 | N/A | 44 |
| **Dormant Members** | | | | | | | | |
| General Service | 5 | 13 | 7 | 25 | 4 | 14 | 4 | 22 |
| Police & Fire | 0 | 5 | 0 | 5 | 1 | 3 | 0 | 4 |
| Total | 5 | 18 | 7 | 30 | 5 | 17 | 4 | 26 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 26 | 1 | 0 | 27 | 25 | 0 | 0 | 25 |
| Police & Fire | 21 | 1 | 0 | 22 | 18 | 1 | 0 | 19 |
| Total | 47 | 2 | 0 | 49 | 43 | 1 | 0 | 44 |
| **Grand Total Number of Members** | **86** | **51** | **43** | **180** | **88** | **57** | **48** | **193** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | 1 | | | | | | | | **1** |
| **30-34** | | 1 | | | | | | | | **1** |
| **35-39** | | 1 | 2 | | | | | | | **3** |
| **40-44** | | | | | | | | | | |
| **45-49** | | 1 | 4 | 1 | 5 | | | | | **11** |
| **50-54** | | 1 | 3 | 3 | 1 | | | | | **8** |
| **55-59** | | 1 | | 1 | 1 | | 1 | | | **4** |
| **60-64** | | 1 | | 1 | 2 | | | | | **4** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **7** | **9** | **6** | **9** | | **1** | | | **32** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 2 | 696 |
| **35-39** | 3 | 315 |
| **40-44** | 1 | 12 |
| **45-49** | 5 | 284 |
| **50-54** | 2 | 446 |
| **55-59** | 6 | 281 |
| **60-64** | 3 | 160 |
| **65-69** | 1 | 3,244 |
| **70-74** | | |
| **75+** | | |
| **Total** | 23 | 438 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 3 | 1,215 |
| **55-59** | 5 | 1,344 |
| **60-64** | 14 | 1,212 |
| **65-69** | 11 | 1,583 |
| **70-74** | 8 | 770 |
| **75-79** | 2 | 909 |
| **80-84** | 4 | 1,134 |
| **85-89** | 2 | 344 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 49 | 1,182 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Rainier/2297
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Rainier/2297

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

City of Rainier -- #2297

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Rainier to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Rainier.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Rainier*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.00% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.29%) | (0.29%) | (0.29%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.86%** | **6.13%** | **8.86%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.45%** | **6.62%** | **9.35%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 87%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.71% | 11.71% |
| Minimum July 1, 2015 Rate | 8.71% | 5.71% |
| Maximum July 1, 2015 Rate | 14.71% | 17.71% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.65% | 1.38% | 1.38% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.15% | 3.15% | 3.15% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $4,498,264 | $3,569,309 | ($928,955) | 126% | $710,435 | (131%) |
| 12/31/2007 | 4,967,287 | 3,742,765 | (1,224,522) | 133% | 820,101 | (149%) |
| 12/31/2008 | 3,730,296 | 3,999,452 | 269,156 | 93% | 876,422 | 31% |
| 12/31/2009 | 3,420,137 | 3,646,822 | 226,685 | 94% | 1,021,880 | 22% |
| 12/31/2010 | 3,747,957 | 4,261,276 | 513,319 | 88% | 1,009,433 | 51% |
| 12/31/2011 | 3,641,708 | 4,207,024 | 565,316 | 87% | 1,076,703 | 53% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Rainier*

| | **Actuarial Valuation as of** | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $565,316 | $513,319 |
| Allocated pooled OPSRP UAL | 18,371 | 12,533 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 583,687 | 525,852 |
| Combined valuation payroll | 1,076,703 | 1,009,433 |
| Net pension UAL as a percentage of payroll | 54% | 52% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $27,893 | $36,318 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $71,448 | $70,308 |
| Tier 1/Tier 2 valuation payroll | 595,397 | 586,145 |
| Tier 1/Tier 2 pension normal cost rate | 12.00% | 11.99% |
| Tier 1/ Tier 2 Actuarial accrued liability | $4,207,024 | $4,261,276 |
| Actuarial asset value | 3,641,708 | 3,747,957 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 565,316 | 513,319 |
| Tier 1/ Tier 2 Funded status | 87% | 88% |
| Combined valuation payroll | $1,076,703 | $1,009,433 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 53% | 51% |
| Tier 1/Tier 2 UAL rate | (0.29%) | (0.28%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 9 | 9 |
| Tier 1/Tier 2 dormant members | 5 | 4 |
| Tier 1/Tier 2 retirees and beneficiaries | 11 | 11 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,076,703 | 1,009,433 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $521,665 | $528,268 |
| 2. Employer reserves | 1,845,531 | 1,819,364 |
| 3. Benefits in force reserve | 1,274,513 | 1,400,325 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$3,641,708** | **$3,747,957** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $3,747,957 |
| 2. | Regular employer contributions | 16,115 |
| 3. | Benefit payments and expenses | (213,536) |
| 4. | Adjustments[2] | 14,576 |
| 5. | Interest credited | 76,595 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$3,641,708** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $9,229 | $8,516 |
| Tier 1 General Service | 14,052 | 9,625 |
| Tier 2 Police & Fire | 34,391 | 39,127 |
| Tier 2 General Service | 13,776 | 13,040 |
| **Total** | **$71,448** | **$70,308** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $71,448 | $71,448 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $701,864 | $672,661 |
| ▪ Tier 1 General Service | 438,745 | 405,553 |
| ▪ Tier 2 Police & Fire | 390,646 | 536,849 |
| ▪ Tier 2 General Service | 217,082 | 192,151 |
| ▪ **Total Active Members** | **$1,748,337** | **$1,807,214** |
| Dormant Members | 140,685 | 148,353 |
| Retired Members and Beneficiaries | 2,318,002 | 2,305,709 |
| **Total Actuarial Accrued Liability** | **$4,207,024** | **$4,261,276** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $4,207,024 | $4,207,024 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $4,207,024 | $4,261,276 |
| 2. Actuarial value of assets | 3,641,708 | 3,747,957 |
| 3. Unfunded accrued liability *(1. – 2.)* | 565,316 | 513,319 |
| 4. Funded percentage *(2. ÷ 1.)* | 87% | 88% |
| 5. Combined valuation payroll | $1,076,703 | $1,009,433 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 53% | 51% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,356,909) | ($111,825) | ($103,793) | ($1,348,877) | ($116,018) |
| December 31, 2009 | $1,591,902 | $121,604 | $122,176 | $1,592,474 | $126,164 |
| December 31, 2011 | N/A | N/A | N/A | $321,719 | $23,759 |
| **Total** | | | | **$565,316** | **$33,905** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $4,261,276 |
| b. Normal cost at December 31, 2010 | 70,308 |
| c. Benefit payments during 2011 | (212,136) |
| d. Interest at 8.0% to December 31, 2011 | 338,041 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 4,457,489 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 4,457,489 |
| 2. Actuarial accrued liability at December 31, 2011 | 4,207,024 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 250,465 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,747,957 |
| b. Contributions for 2011[1] | 16,115 |
| c. Benefit payments and expenses during 2011 | (213,536) |
| d. Interest at 8.0% to December 31, 2011 | 291,940 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,842,477 |
| 5. Actuarial value of assets at December 31, 2011 | 3,641,708 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (200,769) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **$49,696** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$513,319** |
| 2. Expected increase | 101,693 |
| 3. Liability (gain)/loss | (250,465) |
| 4. Asset (gain)/loss | 200,769 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$565,316** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $9,229 | $47,938 | 19.25% | $8,516 | $44,158 | 19.29% |
| Tier 1 General Service | 14,052 | 196,551 | 7.15% | 9,625 | 183,980 | 5.23% |
| Tier 2 Police & Fire | 34,391 | 232,405 | 14.80% | 39,127 | 240,959 | 16.24% |
| Tier 2 General Service | 13,776 | 118,503 | 11.63% | 13,040 | 117,048 | 11.14% |
| **Total** | **$71,448** | **$595,397** | **12.00%** | **$70,308** | **$586,145** | **11.99%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $565,316 | $513,319 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 33,905 | 30,333 |
| 3. Combined valuation payroll | 1,076,703 | 1,009,433 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.15% | 3.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.00% | 11.99% |
| b. Tier 1/Tier 2 UAL rate | 3.15% | 3.00% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 15.28% | 15.11% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 87% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 15.28% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.57%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.15% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.42%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.71% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.00% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.00% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.00% | 11.99% |
| b. Tier 1/Tier 2 UAL rate | (0.42%) | (0.40%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 11.71% | 11.71% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $196,551 | $47,938 | $244,489 |
| Tier 2 | 118,503 | 232,405 | 350,908 |
| Tier 1/Tier 2 valuation payroll | 315,054 | 280,343 | 595,397 |
| OPSRP valuation payroll | 331,994 | 149,312 | 481,306 |
| **Combined valuation payroll** | **$647,048** | **$429,655** | **$1,076,703** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 3 | 2 | 6 | 11 | 3 | 2 | 5 | 10 |
| Police & Fire | 1 | 3 | 2 | 6 | 1 | 3 | 2 | 6 |
| Total | 4 | 5 | 8 | 17 | 4 | 5 | 7 | 16 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| Police & Fire | 4 | 1 | N/A | 5 | 4 | 1 | N/A | 5 |
| Total | 5 | 2 | N/A | 7 | 5 | 2 | N/A | 7 |
| **Dormant Members** | | | | | | | | |
| General Service | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| Police & Fire | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 1 |
| Total | 2 | 3 | 0 | 5 | 2 | 2 | 0 | 4 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 6 | 0 | 0 | 6 | 6 | 0 | 0 | 6 |
| Police & Fire | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| Total | 11 | 0 | 0 | 11 | 11 | 0 | 0 | 11 |
| **Grand Total Number of Members** | **22** | **10** | **8** | **40** | **22** | **9** | **7** | **38** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | 2 | | | | | | | 2 |
| 40-44 | | | 2 | | | | | | | 2 |
| 45-49 | | | | 1 | | | | | | 1 |
| 50-54 | | | 1 | 1 | | | | | | 2 |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | 2 | | | | | 2 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | 5 | 2 | 2 | | | | | 9 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 1 | 983 |
| 35-39 | | |
| 40-44 | | |
| 45-49 | 2 | 562 |
| 50-54 | | |
| 55-59 | 1 | 1,462 |
| 60-64 | | |
| 65-69 | 1 | 313 |
| 70-74 | | |
| 75+ | | |
| Total | 5 | 776 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | 1 | 2,342 |
| 55-59 | | |
| 60-64 | 2 | 1,859 |
| 65-69 | 5 | 1,497 |
| 70-74 | 1 | 120 |
| 75-79 | 2 | 913 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 11 | 1,408 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Salem/2101
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Salem/2101

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Salem/2101

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Salem -- #2101

**Secondary Employers**

| | |
|---|---|
| 2136 | Salem Department Of Utilities |
| 2748 | Salem Area Mass Transit Authority |

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Salem to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Salem.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Salem*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.55% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 13.43% | 13.43% | 13.43% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | (5.66%) | (5.66%) | (5.66%) |
| **Net pension contribution rate** | **18.47%** | **14.19%** | **16.92%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **19.06%** | **14.68%** | **17.41%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 72%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 23.98% | 23.98% |
| Minimum July 1, 2015 Rate | 19.18% | 14.38% |
| Maximum July 1, 2015 Rate | 28.78% | 33.58% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 30 |
| Amortization factor | 12.677 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.74% | 2.91% | 2.91% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.32% | 7.77% | 7.77% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $419,188,963 | $373,414,534 | ($45,774,429) | 112% | $67,441,426 | (68%) |
| 12/31/2007 | 445,649,690 | 390,865,770 | (54,783,920) | 114% | 70,866,049 | (77%) |
| 12/31/2008 | 332,415,600 | 404,323,293 | 71,907,693 | 82% | 74,259,963 | 97% |
| 12/31/2009 | 374,130,052 | 429,509,843 | 55,379,791 | 87% | 74,520,439 | 74% |
| 12/31/2010 | 395,595,667 | 449,744,424 | 54,148,757 | 88% | 76,156,229 | 71% |
| 12/31/2011 | 385,499,542 | 465,044,196 | 79,544,654 | 83% | 77,274,971 | 103% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Salem*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $130,391,684 | $108,470,510 |
| Allocated pooled OPSRP UAL | 1,318,494 | 945,574 |
| Side account | 50,847,030 | 54,321,753 |
| Net unfunded pension actuarial accrued liability | 80,863,148 | 55,094,331 |
| Combined valuation payroll | 77,274,971 | 76,156,229 |
| Net pension UAL as a percentage of payroll | 105% | 72% |
| Calculated side account rate relief | (5.66%) | (5.88%) |
| Allocated pooled RHIA UAL | $2,001,847 | $2,739,981 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5,754,135 | $5,492,754 |
| Tier 1/Tier 2 valuation payroll | 54,522,312 | 55,604,405 |
| Tier 1/Tier 2 pension normal cost rate | 10.55% | 9.88% |
| Tier 1/ Tier 2 Actuarial accrued liability | $465,044,196 | $449,744,424 |
| Actuarial asset value | 334,652,512 | 341,273,914 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 130,391,684 | 108,470,510 |
| Tier 1/ Tier 2 Funded status | 72% | 76% |
| Combined valuation payroll | $77,274,971 | $76,156,229 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 169% | 142% |
| Tier 1/Tier 2 UAL rate | 13.43% | 11.07% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 775 | 812 |
| Tier 1/Tier 2 dormant members | 283 | 276 |
| Tier 1/Tier 2 retirees and beneficiaries | 928 | 872 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | **$54,321,753** | **$54,321,753** |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | (2,000) | (2,000) |
| 4. Amount transferred to employer reserves during 2011 | | (4,930,805) | (4,930,805) |
| 5. Side account earnings during 2011 | | 1,458,082 | 1,458,082 |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | **$50,847,030** | **$50,847,030** |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $47,593,434 | $50,871,189 |
| Side account 2 | 3,253,596 | 3,450,564 |
| Side account 3 | 0 | 0 |
| **Total** | **$50,847,030** | **$54,321,753** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $50,847,030 | $54,321,753 |
| 2. Combined valuation payroll | 77,274,971 | 76,156,229 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | (5.66%) | (5.88%) |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $57,883,252 | $64,139,509 |
| 2. Employer reserves | 128,539,746 | 126,521,625 |
| 3. Benefits in force reserve | 148,229,514 | 150,612,780 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$334,652,512** | **$341,273,914** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $341,273,914 |
| 2. | Regular employer contributions | 4,835,685 |
| 3. | Benefit payments and expenses | (24,834,832) |
| 4. | Adjustments [2] | (833,536) |
| 5. | Interest credited | 9,280,476 |
| 6. | Total transferred from side accounts | 4,930,805 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$334,652,512** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $1,786,534 | $1,685,963 |
| Tier 1 General Service | 763,934 | 758,001 |
| Tier 2 Police & Fire | 1,479,847 | 1,382,329 |
| Tier 2 General Service | 1,723,820 | 1,666,461 |
| **Total** | **$5,754,135** | **$5,492,754** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $5,754,135 | $5,754,135 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $63,803,311 | $63,666,928 |
| ▪ Tier 1 General Service | 71,033,097 | 75,494,714 |
| ▪ Tier 2 Police & Fire | 15,752,104 | 13,314,549 |
| ▪ Tier 2 General Service | 22,198,713 | 20,066,355 |
| ▪ **Total Active Members** | **$172,787,225** | **$172,542,546** |
| Dormant Members | 22,666,598 | 29,210,050 |
| Retired Members and Beneficiaries | 269,590,373 | 247,991,828 |
| **Total Actuarial Accrued Liability** | **$465,044,196** | **$449,744,424** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $465,044,196 | $465,044,196 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $465,044,196 | $449,744,424 |
| 2. Actuarial value of assets | 334,652,512 | 341,273,914 |
| 3. Unfunded accrued liability *(1. – 2.)* | 130,391,684 | 108,470,510 |
| 4. Funded percentage *(2. ÷ 1.)* | 72% | 76% |
| 5. Combined valuation payroll | $77,274,971 | $76,156,229 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 169% | 142% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $8,679,341 | $715,271 | $663,899 | $8,627,969 | $742,094 |
| December 31, 2009 | $100,305,265 | $7,662,267 | $7,698,251 | $100,341,249 | $7,949,602 |
| December 31, 2011 | N/A | N/A | N/A | $21,422,466 | $1,582,045 |
| **Total** | | | | **$130,391,684** | **$10,273,741** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $449,744,424 |
| b. Normal cost at December 31, 2010 | 5,492,754 |
| c. Benefit payments during 2011 | (24,672,050) |
| d. Interest at 8.0% to December 31, 2011 | 35,432,092 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 465,997,220 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 465,997,220 |
| 2. Actuarial accrued liability at December 31, 2011 | 465,044,196 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 953,024 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 341,273,914 |
| b. Contributions for 2011[1] | 9,766,490 |
| c. Benefit payments and expenses during 2011 | (24,834,832) |
| d. Interest at 8.0% to December 31, 2011 | 26,699,179 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 352,904,752 |
| 5. Actuarial value of assets at December 31, 2011 | 334,652,512 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (18,252,239) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($17,299,215)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$108,470,510** |
| 2. Expected increase | 4,621,959 |
| 3. Liability (gain)/loss | (953,024) |
| 4. Asset (gain)/loss | 18,252,239 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$130,391,684** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $1,786,534 | $12,068,505 | 14.80% | $1,685,963 | $12,353,660 | 13.65% |
| Tier 1 General Service | 763,934 | 15,275,771 | 5.00% | 758,001 | 16,220,286 | 4.67% |
| Tier 2 Police & Fire | 1,479,847 | 10,516,465 | 14.07% | 1,382,329 | 10,211,950 | 13.54% |
| Tier 2 General Service | 1,723,820 | 16,661,571 | 10.35% | 1,666,461 | 16,818,509 | 9.91% |
| **Total** | **$5,754,135** | **$54,522,312** | **10.55%** | **$5,492,754** | **$55,604,405** | **9.88%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $130,391,684 | $108,470,510 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 10,273,741 | 8,339,572 |
| 3. Combined valuation payroll | 77,274,971 | 76,156,229 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 13.30% | 10.95% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.55% | 9.88% |
| b. Tier 1/Tier 2 UAL rate | 13.30% | 10.95% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 23.98% | 20.95% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 12.26% |
| 2. | Employer contribution rate attributable to side accounts | (5.67%) |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 17.93% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 3.59% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.59% |
| | c. Funded percentage | 72% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.46% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.47% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 24.39% |
| 7. | July 1, 2013 total pension rate, before adjustment | 23.98% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 13.30% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 13.30% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 23.98% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.55% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.55% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 23.98% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.55% | 9.88% |
| b. Tier 1/Tier 2 UAL rate | 13.30% | 10.95% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 23.98% | 20.95% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $15,275,771 | $12,068,505 | $27,344,276 |
| Tier 2 | 16,661,571 | 10,516,465 | 27,178,036 |
| Tier 1/Tier 2 valuation payroll | 31,937,342 | 22,584,970 | 54,522,312 |
| OPSRP valuation payroll | 15,874,321 | 6,878,338 | 22,752,659 |
| **Combined valuation payroll** | **$47,811,663** | **$29,463,308** | **$77,274,971** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 247 | 279 | 323 | 849 | 267 | 289 | 289 | 845 |
| Police & Fire | 129 | 120 | 89 | 338 | 136 | 120 | 83 | 339 |
| Total | 376 | 399 | 412 | 1,187 | 403 | 409 | 372 | 1,184 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 168 | 147 | N/A | 315 | 192 | 183 | N/A | 375 |
| Police & Fire | 44 | 18 | N/A | 62 | 46 | 18 | N/A | 64 |
| Total | 212 | 165 | N/A | 377 | 238 | 201 | N/A | 439 |
| **Dormant Members** | | | | | | | | |
| General Service | 142 | 111 | 17 | 270 | 148 | 93 | 15 | 256 |
| Police & Fire | 21 | 9 | 0 | 30 | 25 | 10 | 0 | 35 |
| Total | 163 | 120 | 17 | 300 | 173 | 103 | 15 | 291 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 553 | 76 | 2 | 631 | 544 | 41 | 1 | 586 |
| Police & Fire | 282 | 17 | 0 | 299 | 284 | 3 | 0 | 287 |
| Total | 835 | 93 | 2 | 930 | 828 | 44 | 1 | 873 |
| **Grand Total Number of Members** | **1,586** | **777** | **431** | **2,794** | **1,642** | **757** | **388** | **2,787** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | 2 | | | | | | | | **2** |
| **30-34** | | 23 | 11 | | | | | | | **34** |
| **35-39** | 1 | 35 | 60 | 9 | | | | | | **105** |
| **40-44** | | 16 | 57 | 53 | 4 | 1 | | | | **131** |
| **45-49** | 1 | 19 | 47 | 28 | 26 | 6 | | | | **127** |
| **50-54** | | 23 | 35 | 24 | 36 | 18 | 4 | | | **140** |
| **55-59** | | 7 | 32 | 26 | 39 | 19 | 8 | 1 | | **132** |
| **60-64** | | 7 | 20 | 21 | 26 | 7 | 5 | 1 | | **87** |
| **65-69** | | 3 | 3 | 1 | 6 | 2 | | 1 | | **16** |
| **70-74** | | | | | 1 | | | | | **1** |
| **75+** | | | | | | | | | | |
| **Total** | **2** | **135** | **265** | **162** | **138** | **53** | **17** | **3** | | **775** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 2 | 128 |
| **30-34** | 11 | 409 |
| **35-39** | 25 | 489 |
| **40-44** | 36 | 903 |
| **45-49** | 47 | 992 |
| **50-54** | 44 | 900 |
| **55-59** | 60 | 1,107 |
| **60-64** | 32 | 609 |
| **65-69** | 17 | 1,229 |
| **70-74** | 5 | 258 |
| **75+** | 4 | 2,143 |
| **Total** | 283 | 892 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 7 | 1,060 |
| **45-49** | 5 | 2,808 |
| **50-54** | 18 | 1,781 |
| **55-59** | 107 | 3,092 |
| **60-64** | 200 | 2,349 |
| **65-69** | 227 | 2,052 |
| **70-74** | 157 | 1,783 |
| **75-79** | 91 | 1,454 |
| **80-84** | 62 | 1,191 |
| **85-89** | 43 | 840 |
| **90-94** | 8 | 270 |
| **95-99** | 3 | 113 |
| **100+** | | |
| **Total** | 928 | 1,988 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Sheridan/2219
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
City of Sheridan/2219

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
City of Sheridan/2219

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Sheridan -- #2219

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Sheridan to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Sheridan.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Sheridan*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 10.14% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.25% | 0.25% | 0.25% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **10.54%** | **6.67%** | **9.40%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **11.13%** | **7.16%** | **9.89%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 86%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.39% | 10.39% |
| Minimum July 1, 2015 Rate | 7.39% | 4.39% |
| Maximum July 1, 2015 Rate | 13.39% | 16.39% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 6 |
| Amortization factor | 17.175 | 5.474 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.39% | (1.00%) | (1.00%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.05% | 3.91% | 3.91% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $4,178,256 | $3,148,041 | ($1,030,215) | 133% | $760,248 | (136%) |
| 12/31/2007 | 4,184,789 | 3,276,399 | (908,390) | 128% | 796,271 | (114%) |
| 12/31/2008 | 3,227,801 | 3,325,532 | 97,731 | 97% | 841,486 | 12% |
| 12/31/2009 | 3,658,243 | 3,597,257 | (60,986) | 102% | 872,695 | (7%) |
| 12/31/2010 | 3,537,952 | 3,788,496 | 250,544 | 93% | 695,529 | 36% |
| 12/31/2011 | 3,351,410 | 3,904,549 | 553,139 | 86% | 843,575 | 66% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Sheridan*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $553,139 | $250,544 |
| Allocated pooled OPSRP UAL | 14,393 | 8,636 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 567,532 | 259,180 |
| Combined valuation payroll | 843,575 | 695,529 |
| Net pension UAL as a percentage of payroll | 67% | 37% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $21,853 | $25,024 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $54,272 | $46,580 |
| Tier 1/Tier 2 valuation payroll | 535,086 | 455,474 |
| Tier 1/Tier 2 pension normal cost rate | 10.14% | 10.23% |
| Tier 1/ Tier 2 Actuarial accrued liability | $3,904,549 | $3,788,496 |
| Actuarial asset value | 3,351,410 | 3,537,952 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 553,139 | 250,544 |
| Tier 1/ Tier 2 Funded status | 86% | 93% |
| Combined valuation payroll | $843,575 | $695,529 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 66% | 36% |
| Tier 1/Tier 2 UAL rate | 0.25% | 0.16% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 9 | 8 |
| Tier 1/Tier 2 dormant members | 3 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 24 | 24 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 843,575 | 695,529 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $411,261 | $435,759 |
| 2. Employer reserves | 1,577,955 | 1,634,971 |
| 3. Benefits in force reserve | 1,362,194 | 1,467,222 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$3,351,410** | **$3,537,952** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $3,537,952 |
| 2. Regular employer contributions | 21,381 |
| 3. Benefit payments and expenses | (228,226) |
| 4. Adjustments[2] | (69,956) |
| 5. Interest credited | 90,259 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$3,351,410** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 17,625 | 17,344 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 36,647 | 29,236 |
| **Total** | **$54,272** | **$46,580** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $54,272 | $54,272 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $91,227 |
| ▪ Tier 1 General Service | 965,626 | 881,974 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 431,742 | 371,641 |
| ▪ **Total Active Members** | **$1,397,368** | **$1,344,842** |
| Dormant Members | 29,710 | 27,796 |
| Retired Members and Beneficiaries | 2,477,471 | 2,415,858 |
| **Total Actuarial Accrued Liability** | **$3,904,549** | **$3,788,496** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $3,904,549 | $3,904,549 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $3,904,549 | $3,788,496 |
| 2. Actuarial value of assets | 3,351,410 | 3,537,952 |
| 3. Unfunded accrued liability *(1. – 2.)* | 553,139 | 250,544 |
| 4. Funded percentage *(2. ÷ 1.)* | 86% | 93% |
| 5. Combined valuation payroll | $843,575 | $695,529 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 66% | 36% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($982,482) | ($80,968) | ($75,152) | ($976,666) | ($84,004) |
| December 31, 2009 | $926,835 | $70,800 | $71,133 | $927,168 | $73,455 |
| December 31, 2011 | N/A | N/A | N/A | $602,637 | $44,505 |
| **Total** | | | | **$553,139** | **$33,956** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,788,496 |
| b. Normal cost at December 31, 2010 | 46,580 |
| c. Benefit payments during 2011 | (226,730) |
| d. Interest at 8.0% to December 31, 2011 | 297,737 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,906,083 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,906,083 |
| 2. Actuarial accrued liability at December 31, 2011 | 3,904,549 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 1,534 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,537,952 |
| b. Contributions for 2011[1] | 21,381 |
| c. Benefit payments and expenses during 2011 | (228,226) |
| d. Interest at 8.0% to December 31, 2011 | 274,762 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,605,870 |
| 5. Actuarial value of assets at December 31, 2011 | 3,351,410 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (254,460) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($252,926)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$250,544** |
| 2. Expected increase | 49,669 |
| 3. Liability (gain)/loss | (1,534) |
| 4. Asset (gain)/loss | 254,460 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$553,139** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 17,625 | 189,619 | 9.29% | 17,344 | 188,670 | 9.19% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 36,647 | 345,467 | 10.61% | 29,236 | 266,804 | 10.96% |
| **Total** | **$54,272** | **$535,086** | **10.14%** | **$46,580** | **$455,474** | **10.23%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $553,139 | $250,544 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 33,956 | 12,444 |
| 3. Combined valuation payroll | 843,575 | 695,529 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.03% | 1.79% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.14% | 10.23% |
| b. Tier 1/Tier 2 UAL rate | 4.03% | 1.79% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.30% | 12.14% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 7.39% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.39% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.48% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 86% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.39% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 10.39% |
| 7. July 1, 2013 total pension rate, before adjustment | 14.30% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.91%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.03% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.12% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 10.39% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.14% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.14% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 10.39% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.14% | 10.23% |
| b. Tier 1/Tier 2 UAL rate | 0.12% | 0.04% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 10.39% | 10.39% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $189,619 | $0 | $189,619 |
| Tier 2 | 345,467 | 0 | 345,467 |
| Tier 1/Tier 2 valuation payroll | 535,086 | 0 | 535,086 |
| OPSRP valuation payroll | 308,489 | 0 | 308,489 |
| **Combined valuation payroll** | **$843,575** | **$0** | **$843,575** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 3 | 6 | 8 | 17 | 3 | 5 | 7 | 15 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 6 | 8 | 17 | 3 | 5 | 7 | 15 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 2 | 0 | N/A | 2 |
| Total | 1 | 0 | N/A | 1 | 3 | 0 | N/A | 3 |
| **Dormant Members** | | | | | | | | |
| General Service | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 14 | 2 | 0 | 16 | 16 | 1 | 0 | 17 |
| Police & Fire | 8 | 0 | 0 | 8 | 7 | 0 | 0 | 7 |
| Total | 22 | 2 | 0 | 24 | 23 | 1 | 0 | 24 |
| **Grand Total Number of Members** | **28** | **9** | **8** | **45** | **31** | **7** | **7** | **45** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 1 | | | | | | | | 1 |
| 35-39 | | | 1 | | | | | | | 1 |
| 40-44 | | | | | | | | | | |
| 45-49 | | | 1 | | | | | | | 1 |
| 50-54 | | | 2 | | | | | | | 2 |
| 55-59 | | | | 2 | | | 1 | | | 3 |
| 60-64 | | | | 1 | | | | | | 1 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | 1 | 4 | 3 | | | 1 | | | 9 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 1 | 63 |
| 55-59 | | |
| 60-64 | 1 | 162 |
| 65-69 | | |
| 70-74 | | |
| 75+ | 1 | 20 |
| Total | 3 | 82 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 1 | 602 |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 7 |
| 60-64 | 6 | 1,001 |
| 65-69 | 5 | 1,460 |
| 70-74 | 4 | 153 |
| 75-79 | 2 | 195 |
| 80-84 | 2 | 1,642 |
| 85-89 | 3 | 183 |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 24 | 781 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Stanfield/2213
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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September 28, 2012
City of Stanfield/2213

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Stanfield -- #2213

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Stanfield to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Stanfield.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Stanfield*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 14.33% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (8.92%) | (8.92%) | (8.92%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.00%** | **0.23%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **0.49%** | **0.72%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 127%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 2.24% | (7.50%) | (7.50%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 2.65% | (6.58%) | (6.58%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $2,104,359 | $1,283,898 | ($820,461) | 164% | $362,075 | (227%) |
| 12/31/2007 | 2,242,254 | 1,352,522 | (889,732) | 166% | 353,604 | (252%) |
| 12/31/2008 | 1,669,932 | 1,432,526 | (237,406) | 117% | 343,370 | (69%) |
| 12/31/2009 | 1,933,173 | 1,510,326 | (422,847) | 128% | 324,357 | (130%) |
| 12/31/2010 | 2,098,371 | 1,564,203 | (534,168) | 134% | 416,738 | (128%) |
| 12/31/2011 | 2,037,197 | 1,602,362 | (434,835) | 127% | 379,898 | (114%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Stanfield*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($434,835) | ($534,168) |
| Allocated pooled OPSRP UAL | 6,482 | 5,174 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (428,353) | (528,994) |
| Combined valuation payroll | 379,898 | 416,738 |
| Net pension UAL as a percentage of payroll | (113%) | (127%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $9,841 | $14,994 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $21,139 | $21,244 |
| Tier 1/Tier 2 valuation payroll | 228,912 | 255,398 |
| Tier 1/Tier 2 pension normal cost rate | 14.33% | 13.66% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,602,362 | $1,564,203 |
| Actuarial asset value | 2,037,197 | 2,098,371 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (434,835) | (534,168) |
| Tier 1/ Tier 2 Funded status | 127% | 134% |
| Combined valuation payroll | $379,898 | $416,738 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (114%) | (128%) |
| Tier 1/Tier 2 UAL rate | (8.92%) | (8.32%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 6 | 7 |
| Tier 1/Tier 2 dormant members | 6 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 13 | 12 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| ($ in millions) | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| ($ in millions) RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 379,898 | 416,738 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $233,741 | $268,290 |
| 2. Employer reserves | 1,384,254 | 1,421,021 |
| 3. Benefits in force reserve | 419,201 | 409,060 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$2,037,197** | **$2,098,371** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $2,098,371 |
| 2. | Regular employer contributions | 2,346 |
| 3. | Benefit payments and expenses | (70,234) |
| 4. | Adjustments[2] | (47,392) |
| 5. | Interest credited | 54,105 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,037,197** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 1,814 | 4,786 |
| Tier 2 Police & Fire | 16,987 | 14,285 |
| Tier 2 General Service | 2,338 | 2,173 |
| **Total** | **$21,139** | **$21,244** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $21,139 | $21,139 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $40,986 | $40,489 |
| ▪ Tier 1 General Service | 254,252 | 352,575 |
| ▪ Tier 2 Police & Fire | 174,422 | 155,210 |
| ▪ Tier 2 General Service | 56,275 | 51,071 |
| ▪ **Total Active Members** | **$525,935** | **$599,345** |
| Dormant Members | 314,011 | 291,319 |
| Retired Members and Beneficiaries | 762,416 | 673,539 |
| **Total Actuarial Accrued Liability** | **$1,602,362** | **$1,564,203** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,602,362 | $1,602,362 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,602,362 | $1,564,203 |
| 2. Actuarial value of assets | 2,037,197 | 2,098,371 |
| 3. Unfunded accrued liability *(1. – 2.)* | (434,835) | (534,168) |
| 4. Funded percentage *(2. ÷ 1.)* | 127% | 134% |
| 5. Combined valuation payroll | $379,898 | $416,738 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (114%) | (128%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($926,685) | ($76,369) | ($70,884) | ($921,200) | ($79,233) |
| December 31, 2009 | $507,774 | $38,789 | $38,971 | $507,956 | $40,244 |
| December 31, 2011 | N/A | N/A | N/A | ($21,591) | ($1,594) |
| **Total** | | | | **($434,835)** | **($40,583)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,564,203 |
| b. Normal cost at December 31, 2010 | 21,244 |
| c. Benefit payments during 2011 | (69,774) |
| d. Interest at 8.0% to December 31, 2011 | 124,045 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,639,718 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,639,718 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,602,362 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 37,356 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,098,371 |
| b. Contributions for 2011[1] | 2,346 |
| c. Benefit payments and expenses during 2011 | (70,234) |
| d. Interest at 8.0% to December 31, 2011 | 165,154 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,195,637 |
| 5. Actuarial value of assets at December 31, 2011 | 2,037,197 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (158,441) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($121,085)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($534,168)** |
| 2. Expected increase | (21,752) |
| 3. Liability (gain)/loss | (37,356) |
| 4. Asset (gain)/loss | 158,441 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($434,835)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 1,814 | 63,032 | 2.88% | 4,786 | 101,605 | 4.71% |
| Tier 2 Police & Fire | 16,987 | 129,899 | 13.08% | 14,285 | 118,276 | 12.08% |
| Tier 2 General Service | 2,338 | 35,981 | 6.50% | 2,173 | 35,517 | 6.12% |
| **Total** | **$21,139** | **$228,912** | **9.23%** | **$21,244** | **$255,398** | **8.32%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($434,835) | ($534,168) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (40,583) | (46,092) |
| 3. Combined valuation payroll | 379,898 | 416,738 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (10.68%) | (11.06%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.23% | 8.32% |
| b. Tier 1/Tier 2 UAL rate | (10.68%) | (11.06%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | (1.32%) | (2.62%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 127% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 5.10% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 0.31% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 10.51% |
| 7. July 1, 2013 total pension rate, before adjustment | (1.32%) |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 1.63% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (10.68%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (9.05%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 0.31% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 5.10% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.23% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.33% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.33% | 13.66% |
| b. Tier 1/Tier 2 UAL rate | (9.05%) | (8.44%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 5.41% | 5.34% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $63,032 | $0 | $63,032 |
| Tier 2 | 35,981 | 129,899 | 165,880 |
| Tier 1/Tier 2 valuation payroll | 99,013 | 129,899 | 228,912 |
| OPSRP valuation payroll | 118,493 | 32,493 | 150,986 |
| **Combined valuation payroll** | **$217,506** | **$162,392** | **$379,898** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 2 | 5 | 8 | 2 | 2 | 8 | 12 |
| Police & Fire | 0 | 3 | 1 | 4 | 0 | 3 | 1 | 4 |
| Total | 1 | 5 | 6 | 12 | 2 | 5 | 9 | 16 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 2 | 2 | N/A | 4 | 4 | 3 | N/A | 7 |
| Total | 3 | 2 | N/A | 5 | 5 | 3 | N/A | 8 |
| **Dormant Members** | | | | | | | | |
| General Service | 2 | 2 | 0 | 4 | 2 | 2 | 0 | 4 |
| Police & Fire | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 2 |
| Total | 3 | 3 | 1 | 7 | 3 | 3 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 6 | 1 | 0 | 7 | 5 | 1 | 0 | 6 |
| Police & Fire | 6 | 0 | 0 | 6 | 6 | 0 | 0 | 6 |
| Total | 12 | 1 | 0 | 13 | 11 | 1 | 0 | 12 |
| **Grand Total Number of Members** | **19** | **11** | **7** | **37** | **21** | **12** | **9** | **42** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 2 | | | | | | | | **2** |
| **35-39** | | | 1 | | | | | | | **1** |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | | | | 1 | | | | | **1** |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | 1 | | | | | | | **1** |
| **Total** | | **2** | **3** | | **1** | | | | | **6** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 1 | 305 |
| **40-44** | | |
| **45-49** | 2 | 1,328 |
| **50-54** | | |
| **55-59** | 2 | 412 |
| **60-64** | | |
| **65-69** | 1 | 183 |
| **70-74** | | |
| **75+** | | |
| **Total** | 6 | 661 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 3 | 263 |
| **65-69** | 4 | 137 |
| **70-74** | 3 | 1,171 |
| **75-79** | 1 | 573 |
| **80-84** | | |
| **85-89** | 1 | 39 |
| **90-94** | 1 | 18 |
| **95-99** | | |
| **100+** | | |
| **Total** | 13 | 422 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Sweet Home/2129
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Sweet Home/2129

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Sweet Home -- #2129

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Sweet Home to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Sweet Home.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Sweet Home*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 16.77% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (11.36%) | (11.36%) | (11.36%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.00%** | **0.00%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **0.49%** | **0.49%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 112%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 17 | 18 |
| Amortization factor | 12.129 | 12.830 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (9.24%) | (9.24%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (11.36%) | (11.36%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $6,590,624 | $4,442,449 | ($2,148,175) | 148% | $711,226 | (302%) |
| 12/31/2007 | 7,148,035 | 4,825,288 | (2,322,747) | 148% | 751,771 | (309%) |
| 12/31/2008 | 5,349,083 | 5,001,138 | (347,945) | 107% | 803,558 | (43%) |
| 12/31/2009 | 6,230,307 | 5,371,122 | (859,185) | 116% | 817,510 | (105%) |
| 12/31/2010 | 6,905,331 | 5,733,310 | (1,172,021) | 120% | 860,986 | (136%) |
| 12/31/2011 | 6,785,370 | 6,077,241 | (708,129) | 112% | 636,038 | (111%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Sweet Home*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($708,129) | ($1,172,021) |
| Allocated pooled OPSRP UAL | 10,852 | 10,690 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (697,277) | (1,161,331) |
| Combined valuation payroll | 636,038 | 860,986 |
| Net pension UAL as a percentage of payroll | (110%) | (135%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $16,477 | $30,977 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $71,302 | $60,909 |
| Tier 1/Tier 2 valuation payroll | 512,692 | 482,508 |
| Tier 1/Tier 2 pension normal cost rate | 16.77% | 15.55% |
| Tier 1/ Tier 2 Actuarial accrued liability | $6,077,241 | $5,733,310 |
| Actuarial asset value | 6,785,370 | 6,905,331 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (708,129) | (1,172,021) |
| Tier 1/ Tier 2 Funded status | 112% | 120% |
| Combined valuation payroll | $636,038 | $860,986 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (111%) | (136%) |
| Tier 1/Tier 2 UAL rate | (11.36%) | (10.21%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 8 | 8 |
| Tier 1/Tier 2 dormant members | 5 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 10 | 7 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 636,038 | 860,986 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,151,382 | $1,302,794 |
| 2. Employer reserves | 4,289,088 | 4,729,163 |
| 3. Benefits in force reserve | 1,344,900 | 873,374 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$6,785,370** | **$6,905,331** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $6,905,331 |
| 2. Regular employer contributions | 6,555 |
| 3. Benefit payments and expenses | (225,329) |
| 4. Adjustments[2] | (118,859) |
| 5. Interest credited | 217,672 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$6,785,370** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $24,346 | $19,483 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 41,028 | 36,356 |
| Tier 2 General Service | 5,928 | 5,070 |
| **Total** | **$71,302** | **$60,909** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $71,302 | $71,302 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $2,389,428 | $2,480,744 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 876,914 | 742,960 |
| ▪ Tier 2 General Service | 76,976 | 65,480 |
| ▪ **Total Active Members** | **$3,343,318** | **$3,289,184** |
| Dormant Members | 287,906 | 1,006,071 |
| Retired Members and Beneficiaries | 2,446,017 | 1,438,055 |
| **Total Actuarial Accrued Liability** | **$6,077,241** | **$5,733,310** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $6,077,241 | $6,077,241 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $6,077,241 | $5,733,310 |
| 2. Actuarial value of assets | 6,785,370 | 6,905,331 |
| 3. Unfunded accrued liability *(1. – 2.)* | (708,129) | (1,172,021) |
| 4. Funded percentage *(2. ÷ 1.)* | 112% | 120% |
| 5. Combined valuation payroll | $636,038 | $860,986 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (111%) | (136%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($2,419,196) | ($199,369) | ($185,049) | ($2,404,876) | ($206,845) |
| December 31, 2009 | $1,571,023 | $120,010 | $120,573 | $1,571,586 | $124,510 |
| December 31, 2011 | N/A | N/A | N/A | $125,161 | $9,243 |
| **Total** | | | | **($708,129)** | **($73,092)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $5,733,310 |
| b. Normal cost at December 31, 2010 | 60,909 |
| c. Benefit payments during 2011 | (223,852) |
| d. Interest at 8.0% to December 31, 2011 | 454,583 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 6,024,950 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 6,024,950 |
| 2. Actuarial accrued liability at December 31, 2011 | 6,077,241 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (52,291) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 6,905,331 |
| b. Contributions for 2011[1] | 6,555 |
| c. Benefit payments and expenses during 2011 | (225,329) |
| d. Interest at 8.0% to December 31, 2011 | 543,676 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 7,230,233 |
| 5. Actuarial value of assets at December 31, 2011 | 6,785,370 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (444,863) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($497,154)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($1,172,021)** |
| 2. Expected increase | (33,262) |
| 3. Liability (gain)/loss | 52,291 |
| 4. Asset (gain)/loss | 444,863 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($708,129)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $24,346 | $135,580 | 17.96% | $19,483 | $129,557 | 15.04% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 41,028 | 307,716 | 13.33% | 36,356 | 287,674 | 12.64% |
| Tier 2 General Service | 5,928 | 69,396 | 8.54% | 5,070 | 65,277 | 7.77% |
| **Total** | **$71,302** | **$512,692** | **13.91%** | **$60,909** | **$482,508** | **12.62%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($708,129) | ($1,172,021) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (73,092) | (103,275) |
| 3. Combined valuation payroll | 636,038 | 860,986 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (11.49%) | (11.99%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.91% | 12.62% |
| b. Tier 1/Tier 2 UAL rate | (11.49%) | (11.99%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 2.55% | 0.75% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 112% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. July 1, 2013 total pension rate, before adjustment | 2.55% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (11.49%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (11.49%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 2.55% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 2.86% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.91% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 16.77% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.77% | 15.55% |
| b. Tier 1/Tier 2 UAL rate | (11.49%) | (10.33%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $135,580 | $135,580 |
| Tier 2 | 69,396 | 307,716 | 377,112 |
| Tier 1/Tier 2 valuation payroll | 69,396 | 443,296 | 512,692 |
| OPSRP valuation payroll | 0 | 123,346 | 123,346 |
| **Combined valuation payroll** | **$69,396** | **$566,642** | **$636,038** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 2 | 5 | 2 | 9 | 2 | 5 | 7 | 14 |
| Total | 2 | 6 | 2 | 10 | 2 | 6 | 7 | 15 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 21 | 13 | N/A | 34 | 22 | 13 | N/A | 35 |
| Total | 21 | 13 | N/A | 34 | 22 | 13 | N/A | 35 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 3 | 2 | 2 | 7 | 4 | 2 | 0 | 6 |
| Total | 3 | 2 | 2 | 7 | 4 | 2 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 10 | 0 | 0 | 10 | 7 | 0 | 0 | 7 |
| Total | 10 | 0 | 0 | 10 | 7 | 0 | 0 | 7 |
| **Grand Total Number of Members** | **36** | **21** | **4** | **61** | **35** | **21** | **7** | **63** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 1 | | | | | | | | 1 |
| 35-39 | | 1 | 2 | | | | | | | 3 |
| 40-44 | | 1 | 1 | 1 | | | | | | 3 |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | 1 | | | | | 1 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **3** | **3** | **1** | **1** | | | | | **8** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 1 | 177 |
| 35-39 | 1 | 184 |
| 40-44 | 2 | 1,006 |
| 45-49 | 1 | 1,970 |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 5 | 868 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | 1 | 1,428 |
| 55-59 | 3 | 2,423 |
| 60-64 | 3 | 195 |
| 65-69 | 3 | 1,561 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 10 | 1,397 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Waldport/2261
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Waldport/2261

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Waldport/2261

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Waldport -- #2261

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Waldport to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Waldport.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Waldport*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.92% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (1.57%) | (1.57%) | (1.57%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **9.50%** | **4.85%** | **7.58%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.09%** | **5.34%** | **8.07%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 102%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 9.35% | 9.35% |
| Minimum July 1, 2015 Rate | 6.35% | 3.35% |
| Maximum July 1, 2015 Rate | 12.35% | 15.35% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 6 | 6 |
| Amortization factor | 4.895 | 4.948 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.07% | (1.22%) | (1.22%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.35% | (1.57%) | (1.57%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $3,014,896 | $2,253,090 | ($761,806) | 134% | $498,701 | (153%) |
| 12/31/2007 | 3,216,713 | 2,368,891 | (847,822) | 136% | 476,282 | (178%) |
| 12/31/2008 | 2,413,499 | 2,554,725 | 141,226 | 94% | 617,388 | 23% |
| 12/31/2009 | 2,741,234 | 2,692,200 | (49,034) | 102% | 649,400 | (8%) |
| 12/31/2010 | 2,981,867 | 2,802,015 | (179,852) | 106% | 636,529 | (28%) |
| 12/31/2011 | 2,991,828 | 2,932,896 | (58,932) | 102% | 640,777 | (9%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Waldport*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($58,932) | ($179,852) |
| Allocated pooled OPSRP UAL | 10,933 | 7,903 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (47,999) | (171,949) |
| Combined valuation payroll | 640,777 | 636,529 |
| Net pension UAL as a percentage of payroll | (7%) | (27%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $16,600 | $22,901 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $56,557 | $51,295 |
| Tier 1/Tier 2 valuation payroll | 518,141 | 554,303 |
| Tier 1/Tier 2 pension normal cost rate | 10.92% | 9.25% |
| Tier 1/ Tier 2 Actuarial accrued liability | $2,932,896 | $2,802,015 |
| Actuarial asset value | 2,991,828 | 2,981,867 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (58,932) | (179,852) |
| Tier 1/ Tier 2 Funded status | 102% | 106% |
| Combined valuation payroll | $640,777 | $636,529 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (9%) | (28%) |
| Tier 1/Tier 2 UAL rate | (1.57%) | (2.88%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 10 | 11 |
| Tier 1/Tier 2 dormant members | 5 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 17 | 16 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 640,777 | 636,529 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $543,796 | $550,786 |
| 2. Employer reserves | 1,811,132 | 1,771,214 |
| 3. Benefits in force reserve | 636,900 | 659,866 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$2,991,828** | **$2,981,867** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $2,981,867 |
| 2. Regular employer contributions | 31,042 |
| 3. Benefit payments and expenses | (106,708) |
| 4. Adjustments[2] | (3,346) |
| 5. Interest credited | 88,974 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,991,828** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 33,476 | 29,558 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 23,081 | 21,737 |
| **Total** | **$56,557** | **$51,295** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $56,557 | $56,557 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $105,714 | $95,430 |
| ▪ Tier 1 General Service | 864,542 | 1,027,389 |
| ▪ Tier 2 Police & Fire | 7,640 | 6,585 |
| ▪ Tier 2 General Service | 393,871 | 356,710 |
| ▪ **Total Active Members** | **$1,371,767** | **$1,486,114** |
| Dormant Members | 402,776 | 229,396 |
| Retired Members and Beneficiaries | 1,158,353 | 1,086,505 |
| **Total Actuarial Accrued Liability** | **$2,932,896** | **$2,802,015** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $2,932,896 | $2,932,896 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $2,932,896 | $2,802,015 |
| 2. Actuarial value of assets | 2,991,828 | 2,981,867 |
| 3. Unfunded accrued liability *(1. – 2.)* | (58,932) | (179,852) |
| 4. Funded percentage *(2. ÷ 1.)* | 102% | 106% |
| 5. Combined valuation payroll | $640,777 | $636,529 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (9%) | (28%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($943,465) | ($77,752) | ($72,167) | ($937,880) | ($80,668) |
| December 31, 2009 | $899,586 | $68,719 | $69,042 | $899,909 | $71,296 |
| December 31, 2011 | N/A | N/A | N/A | ($20,961) | ($1,548) |
| **Total** | | | | **($58,932)** | **($10,920)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $2,802,015 |
| b. Normal cost at December 31, 2010 | 51,295 |
| c. Benefit payments during 2011 | (106,009) |
| d. Interest at 8.0% to December 31, 2011 | 224,024 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 2,971,325 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 2,971,325 |
| 2. Actuarial accrued liability at December 31, 2011 | 2,932,896 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 38,429 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,981,867 |
| b. Contributions for 2011[1] | 31,042 |
| c. Benefit payments and expenses during 2011 | (106,708) |
| d. Interest at 8.0% to December 31, 2011 | 235,523 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,141,723 |
| 5. Actuarial value of assets at December 31, 2011 | 2,991,828 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (149,895) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($111,466)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($179,852)** |
| 2. Expected increase | 9,454 |
| 3. Liability (gain)/loss | (38,429) |
| 4. Asset (gain)/loss | 149,895 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($58,932)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 33,476 | 344,820 | 9.71% | 29,558 | 385,403 | 7.67% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 23,081 | 173,321 | 13.32% | 21,737 | 168,900 | 12.87% |
| **Total** | **$56,557** | **$518,141** | **10.92%** | **$51,295** | **$554,303** | **9.25%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($58,932) | ($179,852) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (10,920) | (19,075) |
| 3. Combined valuation payroll | 640,777 | 636,529 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.70%) | (3.00%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.92% | 9.25% |
| b. Tier 1/Tier 2 UAL rate | (1.70%) | (3.00%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 9.35% | 6.37% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.07% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.07% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.61% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 102% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.07% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.07% |
| 7. July 1, 2013 total pension rate, before adjustment | 9.35% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.70%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.70%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 9.35% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.92% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.92% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 9.35% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.92% | 9.25% |
| b. Tier 1/Tier 2 UAL rate | (1.70%) | (3.00%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 9.35% | 6.37% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $344,820 | $0 | $344,820 |
| Tier 2 | 173,321 | 0 | 173,321 |
| Tier 1/Tier 2 valuation payroll | 518,141 | 0 | 518,141 |
| OPSRP valuation payroll | 122,636 | 0 | 122,636 |
| **Combined valuation payroll** | **$640,777** | **$0** | **$640,777** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 7 | 3 | 3 | 13 | 8 | 3 | 2 | 13 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 7 | 3 | 3 | 13 | 8 | 3 | 2 | 13 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| Police & Fire | 3 | 1 | N/A | 4 | 3 | 2 | N/A | 5 |
| Total | 4 | 2 | N/A | 6 | 4 | 3 | N/A | 7 |
| **Dormant Members** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 3 | 1 | 0 | 4 |
| Police & Fire | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Total | 4 | 1 | 0 | 5 | 4 | 2 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 9 | 2 | 0 | 11 | 8 | 2 | 0 | 10 |
| Police & Fire | 6 | 0 | 0 | 6 | 6 | 0 | 0 | 6 |
| Total | 15 | 2 | 0 | 17 | 14 | 2 | 0 | 16 |
| **Grand Total Number of Members** | **30** | **8** | **3** | **41** | **30** | **10** | **2** | **42** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | 1 | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | 1 | 2 | | | | | | **3** |
| **55-59** | | | 1 | 1 | | | | | | **2** |
| **60-64** | | 1 | | 2 | 1 | | | | | **4** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **2** | **6** | **1** | | | | | **10** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | 2 | 1,662 |
| **55-59** | 2 | 348 |
| **60-64** | | |
| **65-69** | 1 | 74 |
| **70-74** | | |
| **75+** | | |
| **Total** | 5 | 819 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 813 |
| **55-59** | 1 | 595 |
| **60-64** | 3 | 416 |
| **65-69** | 6 | 485 |
| **70-74** | 1 | 246 |
| **75-79** | 1 | 228 |
| **80-84** | 4 | 769 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 17 | 536 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Westfir/2265
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Westfir/2265

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Westfir/2265

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### City of Westfir -- #2265

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Westfir to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Westfir.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Westfir*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 11.13% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (5.72%) | (5.72%) | (5.72%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.70%** | **3.43%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **1.19%** | **3.92%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 118%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 25 | 17 |
| Amortization factor | 15.483 | 11.927 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.10% | (4.00%) | (4.00%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (5.72%) | (5.72%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $145,265 | $128,962 | ($16,303) | 113% | $43,415 | (38%) |
| 12/31/2007 | 160,871 | 133,390 | (27,481) | 121% | 43,357 | (63%) |
| 12/31/2008 | 131,276 | 143,252 | 11,976 | 92% | 46,695 | 26% |
| 12/31/2009 | 98,230 | 82,913 | (15,317) | 118% | 31,117 | (49%) |
| 12/31/2010 | 108,493 | 110,815 | 2,322 | 98% | 0 | 0% |
| 12/31/2011 | 92,868 | 79,032 | (13,836) | 118% | 15,361 | (90%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Westfir*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($13,836) | $2,322 |
| Allocated pooled OPSRP UAL | 262 | 0 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (13,574) | 2,322 |
| Combined valuation payroll | 15,361 | 0 |
| Net pension UAL as a percentage of payroll | (88%) | 0% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $398 | $0 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $0 | $0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 11.13% | 0.90% |
| Tier 1/ Tier 2 Actuarial accrued liability | $79,032 | $110,815 |
| Actuarial asset value | 92,868 | 108,493 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (13,836) | 2,322 |
| Tier 1/ Tier 2 Funded status | 118% | 98% |
| Combined valuation payroll | $15,361 | $0 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (90%) | 0% |
| Tier 1/Tier 2 UAL rate | (5.72%) | 5.10% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 1 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 15,361 | 0 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $3,491 | $8,321 |
| 2. Employer reserves | 47,817 | 71,896 |
| 3. Benefits in force reserve | 41,559 | 28,276 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$92,868** | **$108,493** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $108,493 |
| 2. | Regular employer contributions | 94 |
| 3. | Benefit payments and expenses | (6,963) |
| 4. | Adjustments[2] | (11,971) |
| 5. | Interest credited | 3,215 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$92,868** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$0** | **$0** |
| Dormant Members | 3,446 | 64,257 |
| Retired Members and Beneficiaries | 75,586 | 46,558 |
| **Total Actuarial Accrued Liability** | **$79,032** | **$110,815** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $79,032 | $79,032 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $79,032 | $110,815 |
| 2. Actuarial value of assets | 92,868 | 108,493 |
| 3. Unfunded accrued liability *(1. – 2.)* | (13,836) | 2,322 |
| 4. Funded percentage *(2. ÷ 1.)* | 118% | 98% |
| 5. Combined valuation payroll | $15,361 | $0 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (90%) | 0% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($27,798) | ($2,291) | ($2,126) | ($27,633) | ($2,377) |
| December 31, 2009 | $12,591 | $962 | $966 | $12,595 | $998 |
| December 31, 2011 | N/A | N/A | N/A | $1,202 | $89 |
| **Total** | | | | **($13,836)** | **($1,290)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $110,815 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | (6,917) |
| d. Interest at 8.0% to December 31, 2011 | 8,589 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 112,487 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 112,487 |
| 2. Actuarial accrued liability at December 31, 2011 | 79,032 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 33,455 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 108,493 |
| b. Contributions for 2011[1] | 94 |
| c. Benefit payments and expenses during 2011 | (6,963) |
| d. Interest at 8.0% to December 31, 2011 | 8,405 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 110,028 |
| 5. Actuarial value of assets at December 31, 2011 | 92,868 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (17,161) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **$16,294** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,322** |
| 2. Expected increase | 136 |
| 3. Liability (gain)/loss | (33,455) |
| 4. Asset (gain)/loss | 17,161 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($13,836)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$0** | **$0** | **10.82%** | **$0** | **$0** | **10.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($13,836) | $2,322 |
| 2. Next year's Tier 1/Tier 2 UAL payment | (1,290) | (34) |
| 3. Combined valuation payroll | 15,361 | 0 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (8.40%) | 0.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 0.00% |
| b. Tier 1/Tier 2 UAL rate | (8.40%) | 0.00% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.00% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 2.55% | 0.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.10% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.10% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.62% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 118% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.10% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.10% |
| 7. July 1, 2013 total pension rate, before adjustment | 2.55% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 2.55% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (8.40%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (5.85%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 5.10% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.31% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.82% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 11.13% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.13% | 0.90% |
| b. Tier 1/Tier 2 UAL rate | (5.85%) | 5.10% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.00% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 5.41% | 6.00% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 | 0 |
| OPSRP valuation payroll | 15,361 | 0 | 15,361 |
| **Combined valuation payroll** | **$15,361** | **$0** | **$15,361** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **1** | **2** | **2** | **5** | **1** | **2** | **0** | **3** |

1 *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | 1 | 287 |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 287 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | 1 | 223 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | 1 | 603 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 2 | 413 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Weston/2206
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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September 28, 2012
City of Weston/2206

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Weston/2206

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

City of Weston -- #2206

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Weston to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Weston.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Weston*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.29% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (4.88%) | (4.88%) | (4.88%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.56%** | **1.54%** | **4.27%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **9.15%** | **2.03%** | **4.76%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 92%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.41% | 8.41% |
| Minimum July 1, 2015 Rate | 5.41% | 2.41% |
| Maximum July 1, 2015 Rate | 11.41% | 14.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 0.36% | (10.95%) | (10.95%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.44% | 2.15% | 2.15% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,087,790 | $765,749 | ($322,041) | 142% | $173,592 | (186%) |
| 12/31/2007 | 1,178,613 | 818,039 | (360,574) | 144% | 139,196 | (259%) |
| 12/31/2008 | 901,552 | 792,864 | (108,688) | 114% | 175,726 | (62%) |
| 12/31/2009 | 1,007,845 | 738,301 | (269,544) | 137% | 142,131 | (190%) |
| 12/31/2010 | 1,105,508 | 853,708 | (251,800) | 129% | 189,752 | (133%) |
| 12/31/2011 | 948,286 | 1,032,925 | 84,639 | 92% | 239,512 | 35% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Weston*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $84,639 | ($251,800) |
| Allocated pooled OPSRP UAL | 4,087 | 2,356 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 88,726 | (249,444) |
| Combined valuation payroll | 239,512 | 189,752 |
| Net pension UAL as a percentage of payroll | 37% | (131%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $6,205 | $6,827 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $9,473 | $8,596 |
| Tier 1/Tier 2 valuation payroll | 71,291 | 69,553 |
| Tier 1/Tier 2 pension normal cost rate | 13.29% | 16.53% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,032,925 | $853,708 |
| Actuarial asset value | 948,286 | 1,105,508 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 84,639 | (251,800) |
| Tier 1/ Tier 2 Funded status | 92% | 129% |
| Combined valuation payroll | $239,512 | $189,752 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 35% | (133%) |
| Tier 1/Tier 2 UAL rate | (4.88%) | (11.19%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 0 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 7 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 239,512 | 189,752 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $80,460 | $308,919 |
| 2. Employer reserves | 438,873 | 716,065 |
| 3. Benefits in force reserve | 428,953 | 80,524 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$948,286** | **$1,105,508** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,105,508 |
| 2. | Regular employer contributions | (3,971) |
| 3. | Benefit payments and expenses | (71,868) |
| 4. | Adjustments[2] | (110,799) |
| 5. | Interest credited | 29,417 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$948,286** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 9,473 | 8,596 |
| **Total** | **$9,473** | **$8,596** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $9,473 | $9,473 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $100,892 | $148,441 |
| ▪ Tier 1 General Service | 11,051 | 298,906 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 140,830 | 168,006 |
| ▪ **Total Active Members** | **$252,773** | **$615,353** |
| Dormant Members | 0 | 105,769 |
| Retired Members and Beneficiaries | 780,152 | 132,586 |
| **Total Actuarial Accrued Liability** | **$1,032,925** | **$853,708** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,032,925 | $1,032,925 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,032,925 | $853,708 |
| 2. Actuarial value of assets | 948,286 | 1,105,508 |
| 3. Unfunded accrued liability *(1. – 2.)* | 84,639 | (251,800) |
| 4. Funded percentage *(2. ÷ 1.)* | 92% | 129% |
| 5. Combined valuation payroll | $239,512 | $189,752 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 35% | (133%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($362,066) | ($29,837) | ($27,695) | ($359,924) | ($30,956) |
| December 31, 2009 | $93,746 | $7,161 | $7,195 | $93,780 | $7,430 |
| December 31, 2011 | N/A | N/A | N/A | $350,783 | $25,905 |
| **Total** | | | | **$84,639** | **$2,379** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $853,708 |
| b. Normal cost at December 31, 2010 | 8,596 |
| c. Benefit payments during 2011 | (71,397) |
| d. Interest at 8.0% to December 31, 2011 | 66,128 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 857,035 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 857,035 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,032,925 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (175,890) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,105,508 |
| b. Contributions for 2011[1] | (3,971) |
| c. Benefit payments and expenses during 2011 | (71,868) |
| d. Interest at 8.0% to December 31, 2011 | 85,407 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,115,076 |
| 5. Actuarial value of assets at December 31, 2011 | 948,286 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (166,790) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($342,680)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($251,800)** |
| 2. Expected increase | (6,241) |
| 3. Liability (gain)/loss | 175,890 |
| 4. Asset (gain)/loss | 166,790 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$84,639** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 9,473 | 71,291 | 13.29% | 8,596 | 69,553 | 12.36% |
| **Total** | **$9,473** | **$71,291** | **13.29%** | **$8,596** | **$69,553** | **12.36%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $84,639 | ($251,800) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 2,379 | (21,456) |
| 3. Combined valuation payroll | 239,512 | 189,752 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.99% | (11.31%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.29% | 12.36% |
| b. Tier 1/Tier 2 UAL rate | 0.99% | (11.31%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.41% | 1.17% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 92% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. July 1, 2013 total pension rate, before adjustment | 14.41% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (6.00%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.99% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (5.01%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.41% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.29% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.29% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.29% | 16.53% |
| b. Tier 1/Tier 2 UAL rate | (5.01%) | (11.31%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 8.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 71,291 | 0 | 71,291 |
| Tier 1/Tier 2 valuation payroll | 71,291 | 0 | 71,291 |
| OPSRP valuation payroll | 84,294 | 83,927 | 168,221 |
| **Combined valuation payroll** | **$155,585** | **$83,927** | **$239,512** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 4 |
| Police & Fire | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 1 |
| Total | 0 | 2 | 5 | 7 | 0 | 2 | 3 | 5 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 2 | 1 | N/A | 3 |
| Police & Fire | 1 | 0 | N/A | 1 | 2 | 0 | N/A | 2 |
| Total | 2 | 0 | N/A | 2 | 4 | 1 | N/A | 5 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 3 | 1 | 0 | 4 | 1 | 0 | 0 | 1 |
| Police & Fire | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 2 |
| Total | 5 | 2 | 0 | 7 | 2 | 1 | 0 | 3 |
| **Grand Total Number of Members** | **7** | **4** | **5** | **16** | **7** | **5** | **3** | **15** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | 1 | 1 | | | | | | 2 |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | 1 | 1 | | | | | | 2 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 249 |
| 60-64 | 5 | 768 |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | 1 | 1,057 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 7 | 735 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

City of Willamina/2189
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
City of Willamina/2189

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
City of Willamina/2189

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

City of Willamina -- #2189

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for City of Willamina to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to City of Willamina.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for City of Willamina*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.17% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (6.76%) | (6.76%) | (6.76%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.00%** | **2.39%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **0.49%** | **2.88%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 162%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (9.54%) | (17.84%) | (17.84%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (8.06%) | (14.82%) | (14.82%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $2,101,422 | $1,032,643 | ($1,068,779) | 204% | $190,266 | (562%) |
| 12/31/2007 | 2,282,173 | 1,084,238 | (1,197,935) | 210% | 135,702 | (883%) |
| 12/31/2008 | 1,760,004 | 1,113,927 | (646,077) | 158% | 205,155 | (315%) |
| 12/31/2009 | 2,035,372 | 1,205,530 | (829,842) | 169% | 269,485 | (308%) |
| 12/31/2010 | 2,130,802 | 1,190,844 | (939,958) | 179% | 289,477 | (325%) |
| 12/31/2011 | 2,108,150 | 1,299,674 | (808,476) | 162% | 315,834 | (256%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *City of Willamina*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($808,476) | ($939,958) |
| Allocated pooled OPSRP UAL | 5,389 | 3,594 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (803,087) | (936,364) |
| Combined valuation payroll | 315,834 | 289,477 |
| Net pension UAL as a percentage of payroll | (254%) | (323%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $8,182 | $10,415 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $12,597 | $10,272 |
| Tier 1/Tier 2 valuation payroll | 186,452 | 173,957 |
| Tier 1/Tier 2 pension normal cost rate | 12.17% | 11.24% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,299,674 | $1,190,844 |
| Actuarial asset value | 2,108,150 | 2,130,802 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (808,476) | (939,958) |
| Tier 1/ Tier 2 Funded status | 162% | 179% |
| Combined valuation payroll | $315,834 | $289,477 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (256%) | (325%) |
| Tier 1/Tier 2 UAL rate | (6.76%) | (5.90%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 5 | 5 |
| Tier 1/Tier 2 dormant members | 5 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 10 | 9 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 315,834 | 289,477 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $344,748 | $340,965 |
| 2. Employer reserves | 1,510,253 | 1,547,072 |
| 3. Benefits in force reserve | 253,149 | 242,765 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$2,108,150** | **$2,130,802** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $2,130,802 |
| 2. Regular employer contributions | 3,362 |
| 3. Benefit payments and expenses | (42,413) |
| 4. Adjustments [2] | (47,785) |
| 5. Interest credited | 64,185 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,108,150** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 4,619 | 3,704 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 7,978 | 6,568 |
| **Total** | **$12,597** | **$10,272** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $12,597 | $12,597 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $75,609 | $260,484 |
| ▪ Tier 1 General Service | 288,803 | 255,334 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 158,247 | 140,489 |
| ▪ **Total Active Members** | **$522,659** | **$656,307** |
| Dormant Members | 316,603 | 134,811 |
| Retired Members and Beneficiaries | 460,412 | 399,726 |
| **Total Actuarial Accrued Liability** | **$1,299,674** | **$1,190,844** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,299,674 | $1,299,674 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,299,674 | $1,190,844 |
| 2. Actuarial value of assets | 2,108,150 | 2,130,802 |
| 3. Unfunded accrued liability *(1. – 2.)* | (808,476) | (939,958) |
| 4. Funded percentage *(2. ÷ 1.)* | 162% | 179% |
| 5. Combined valuation payroll | $315,834 | $289,477 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (256%) | (325%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,243,859) | ($102,507) | ($95,145) | ($1,236,497) | ($106,351) |
| December 31, 2009 | $418,512 | $31,970 | $32,120 | $418,662 | $33,169 |
| December 31, 2011 | N/A | N/A | N/A | $9,359 | $691 |
| **Total** | | | | **($808,476)** | **($72,491)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,190,844 |
| b. Normal cost at December 31, 2010 | 10,272 |
| c. Benefit payments during 2011 | (42,135) |
| d. Interest at 8.0% to December 31, 2011 | 94,404 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,253,385 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,253,385 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,299,674 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (46,289) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,130,802 |
| b. Contributions for 2011[1] | 3,362 |
| c. Benefit payments and expenses during 2011 | (42,413) |
| d. Interest at 8.0% to December 31, 2011 | 168,902 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,260,653 |
| 5. Actuarial value of assets at December 31, 2011 | 2,108,150 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (152,502) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($198,791)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($939,958)** |
| 2. Expected increase | (67,309) |
| 3. Liability (gain)/loss | 46,289 |
| 4. Asset (gain)/loss | 152,502 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($808,476)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 4,619 | 79,818 | 5.79% | 3,704 | 76,159 | 4.86% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 7,978 | 106,634 | 7.48% | 6,568 | 97,798 | 6.72% |
| **Total** | **$12,597** | **$186,452** | **6.76%** | **$10,272** | **$173,957** | **5.90%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($808,476) | ($939,958) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (72,491) | (79,001) |
| 3. Combined valuation payroll | 315,834 | 289,477 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (22.95%) | (27.29%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.76% | 5.90% |
| b. Tier 1/Tier 2 UAL rate | (22.95%) | (27.29%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | (16.06%) | (21.27%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 162% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 0.00% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.41% |
| 7. July 1, 2013 total pension rate, before adjustment | (16.06%) |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 16.06% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (22.95%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (6.89%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 0.00% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 5.41% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 6.76% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.17% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.17% | 11.24% |
| b. Tier 1/Tier 2 UAL rate | (6.89%) | (6.02%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $79,818 | $0 | $79,818 |
| Tier 2 | 106,634 | 0 | 106,634 |
| Tier 1/Tier 2 valuation payroll | 186,452 | 0 | 186,452 |
| OPSRP valuation payroll | 129,382 | 0 | 129,382 |
| **Combined valuation payroll** | **$315,834** | **$0** | **$315,834** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 3 | 3 | 8 | 2 | 3 | 3 | 8 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 3 | 3 | 8 | 2 | 3 | 3 | 8 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 4 | 1 | N/A | 5 | 4 | 2 | N/A | 6 |
| Police & Fire | 1 | 0 | N/A | 1 | 3 | 0 | N/A | 3 |
| Total | 5 | 1 | N/A | 6 | 7 | 2 | N/A | 9 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 3 | 0 | 4 | 1 | 2 | 0 | 3 |
| Police & Fire | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total | 2 | 3 | 0 | 5 | 1 | 2 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| Police & Fire | 5 | 0 | 0 | 5 | 4 | 0 | 0 | 4 |
| Total | 10 | 0 | 0 | 10 | 9 | 0 | 0 | 9 |
| **Grand Total Number of Members** | **19** | **7** | **3** | **29** | **19** | **7** | **3** | **29** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | 1 | | | | | | | **1** |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | 1 | | | | | | | | **1** |
| **45-49** | | | | 1 | | | | | | **1** |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | 1 | 1 | | | | | **2** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **1** | **2** | **1** | | | | | **5** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | 1 | 232 |
| **50-54** | | |
| **55-59** | 2 | 487 |
| **60-64** | 2 | 588 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 5 | 476 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 3 | 270 |
| **55-59** | 1 | 15 |
| **60-64** | 2 | 626 |
| **65-69** | 1 | 36 |
| **70-74** | 2 | 364 |
| **75-79** | 1 | 152 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 10 | 299 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Clackamas County Housing Authority/2518
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Clackamas County Housing Authority/2518

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Clackamas County Housing Authority -- #2518

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Clackamas County Housing Authority to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Clackamas County Housing Authority.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Clackamas County Housing Authority*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.82% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 7.68% | 7.68% | 7.68% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.65%** | **14.10%** | **16.83%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.24%** | **14.59%** | **17.32%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 80%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.50% | 16.50% |
| Minimum July 1, 2015 Rate | 13.20% | 9.90% |
| Maximum July 1, 2015 Rate | 19.80% | 23.10% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 25 | 22 |
| Amortization factor | 15.650 | 14.226 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.50% | 6.17% | 6.17% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.50% | 7.68% | 7.68% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $10,819,940 | $10,346,770 | ($473,170) | 105% | $1,692,233 | (28%) |
| 12/31/2007 | 11,598,935 | 10,761,023 | (837,912) | 108% | 1,799,293 | (47%) |
| 12/31/2008 | 8,613,000 | 11,233,387 | 2,620,387 | 77% | 1,759,585 | 149% |
| 12/31/2009 | 9,659,189 | 11,443,624 | 1,784,435 | 84% | 2,068,743 | 86% |
| 12/31/2010 | 10,112,860 | 12,051,368 | 1,938,508 | 84% | 2,099,623 | 92% |
| 12/31/2011 | 10,097,984 | 12,671,485 | 2,573,501 | 80% | 2,168,456 | 119% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Clackamas County Housing Authority*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $2,573,501 | $1,938,508 |
| Allocated pooled OPSRP UAL | 36,999 | 26,069 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,610,500 | 1,964,577 |
| Combined valuation payroll | 2,168,456 | 2,099,623 |
| Net pension UAL as a percentage of payroll | 120% | 94% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $56,175 | $75,541 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $139,043 | $125,074 |
| Tier 1/Tier 2 valuation payroll | 1,575,902 | 1,574,002 |
| Tier 1/Tier 2 pension normal cost rate | 8.82% | 7.95% |
| Tier 1/ Tier 2 Actuarial accrued liability | $12,671,485 | $12,051,368 |
| Actuarial asset value | 10,097,984 | 10,112,860 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 2,573,501 | 1,938,508 |
| Tier 1/ Tier 2 Funded status | 80% | 84% |
| Combined valuation payroll | $2,168,456 | $2,099,623 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 119% | 92% |
| Tier 1/Tier 2 UAL rate | 7.68% | 6.81% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 30 | 31 |
| Tier 1/Tier 2 dormant members | 10 | 8 |
| Tier 1/Tier 2 retirees and beneficiaries | 35 | 34 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 2,168,456 | 2,099,623 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,801,547 | $1,779,793 |
| 2. Employer reserves | 4,636,716 | 4,336,237 |
| 3. Benefits in force reserve | 3,659,722 | 3,996,829 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$10,097,984** | **$10,112,860** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $10,112,860 |
| 2. | Regular employer contributions | 223,174 |
| 3. | Benefit payments and expenses | (613,161) |
| 4. | Adjustments [2] | 83,644 |
| 5. | Interest credited | 291,467 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$10,097,984** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 45,502 | 34,037 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 93,541 | 91,037 |
| **Total** | **$139,043** | **$125,074** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $139,043 | $139,043 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 3,316,515 | 3,198,915 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 1,140,956 | 1,041,307 |
| ▪ **Total Active Members** | **$4,457,471** | **$4,240,222** |
| Dormant Members | 1,557,947 | 1,230,157 |
| Retired Members and Beneficiaries | 6,656,067 | 6,580,989 |
| **Total Actuarial Accrued Liability** | **$12,671,485** | **$12,051,368** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $12,671,485 | $12,671,485 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $12,671,485 | $12,051,368 |
| 2. Actuarial value of assets | 10,097,984 | 10,112,860 |
| 3. Unfunded accrued liability *(1. – 2.)* | 2,573,501 | 1,938,508 |
| 4. Funded percentage *(2. ÷ 1.)* | 80% | 84% |
| 5. Combined valuation payroll | $2,168,456 | $2,099,623 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 119% | 92% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,215,453) | ($100,166) | ($92,972) | ($1,208,259) | ($103,922) |
| December 31, 2009 | $3,012,083 | $230,092 | $231,172 | $3,013,163 | $238,720 |
| December 31, 2011 | N/A | N/A | N/A | $768,597 | $56,761 |
| **Total** | | | | **$2,573,501** | **$191,559** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $12,051,368 |
| b. Normal cost at December 31, 2010 | 125,074 |
| c. Benefit payments during 2011 | (609,142) |
| d. Interest at 8.0% to December 31, 2011 | 949,750 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 12,517,050 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 12,517,050 |
| 2. Actuarial accrued liability at December 31, 2011 | 12,671,485 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (154,435) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 10,112,860 |
| b. Contributions for 2011[1] | 223,174 |
| c. Benefit payments and expenses during 2011 | (613,161) |
| d. Interest at 8.0% to December 31, 2011 | 793,429 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 10,516,302 |
| 5. Actuarial value of assets at December 31, 2011 | 10,097,984 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (418,318) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($572,753)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$1,938,508** |
| 2. Expected increase | 62,240 |
| 3. Liability (gain)/loss | 154,435 |
| 4. Asset (gain)/loss | 418,318 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$2,573,501** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 45,502 | 761,325 | 5.98% | 34,037 | 756,418 | 4.50% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 93,541 | 814,577 | 11.48% | 91,037 | 817,584 | 11.13% |
| **Total** | **$139,043** | **$1,575,902** | **8.82%** | **$125,074** | **$1,574,002** | **7.95%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $2,573,501 | $1,938,508 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 191,559 | 140,404 |
| 3. Combined valuation payroll | 2,168,456 | 2,099,623 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.83% | 6.69% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.82% | 7.95% |
| b. Tier 1/Tier 2 UAL rate | 8.83% | 6.69% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.78% | 14.76% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 13.50% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.50% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.70% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 80% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.50% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.50% |
| 7. | July 1, 2013 total pension rate, before adjustment | 17.78% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.28%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.83% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 7.55% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.50% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.82% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.82% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.50% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.82% | 7.95% |
| b. Tier 1/Tier 2 UAL rate | 7.55% | 6.69% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.50% | 14.76% |

# Data

## Demographic Information

### Employer Valuation Payroll

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $761,325 | $0 | $761,325 |
| Tier 2 | 814,577 | 0 | 814,577 |
| Tier 1/Tier 2 valuation payroll | 1,575,902 | 0 | 1,575,902 |
| OPSRP valuation payroll | 592,554 | 0 | 592,554 |
| **Combined valuation payroll** | **$2,168,456** | **$0** | **$2,168,456** |

### Employer Member Census

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 14 | 16 | 12 | 42 | 14 | 17 | 12 | 43 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 14 | 16 | 12 | 42 | 14 | 17 | 12 | 43 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 4 | 5 | N/A | 9 | 8 | 8 | N/A | 16 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 4 | 5 | N/A | 9 | 8 | 8 | N/A | 16 |
| **Dormant Members** | | | | | | | | |
| General Service | 9 | 1 | 0 | 10 | 8 | 0 | 0 | 8 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 9 | 1 | 0 | 10 | 8 | 0 | 0 | 8 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 29 | 6 | 0 | 35 | 29 | 5 | 0 | 34 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 29 | 6 | 0 | 35 | 29 | 5 | 0 | 34 |
| **Grand Total Number of Members** | **56** | **28** | **12** | **96** | **59** | **30** | **12** | **101** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 1 | | | | | | | | 1 |
| 35-39 | | | | | | | | | | |
| 40-44 | | 1 | 1 | 1 | | | | | | 3 |
| 45-49 | | | 3 | 2 | 1 | | | | | 6 |
| 50-54 | | 4 | 1 | | 1 | 1 | | | | 7 |
| 55-59 | | | 3 | | | 2 | | | | 5 |
| 60-64 | | 1 | | 3 | 2 | | | | | 6 |
| 65-69 | | | 1 | | 1 | | | | | 2 |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **7** | **9** | **6** | **5** | **3** | | | | **30** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | 953 |
| 45-49 | 2 | 3,318 |
| 50-54 | 3 | 1,919 |
| 55-59 | 2 | 1,277 |
| 60-64 | | |
| 65-69 | 2 | 419 |
| 70-74 | | |
| 75+ | | |
| **Total** | 10 | 1,674 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | 1 | 2,202 |
| 55-59 | 1 | 2,271 |
| 60-64 | 11 | 1,726 |
| 65-69 | 5 | 993 |
| 70-74 | 7 | 1,365 |
| 75-79 | 5 | 1,215 |
| 80-84 | | |
| 85-89 | 3 | 768 |
| 90-94 | | |
| 95-99 | 2 | 386 |
| 100+ | | |
| **Total** | 35 | 1,347 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Clackamas County/2001
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Clackamas County/2001

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Clackamas County -- #2001

### Secondary Employers

2045 Clackamas County Service District #1

2791 Clackamas County Fair

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Clackamas County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Clackamas County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Clackamas County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.29% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 8.06% | 8.06% | 8.06% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **18.50%** | **14.48%** | **17.21%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **19.09%** | **14.97%** | **17.70%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 18.35% | 18.35% |
| Minimum July 1, 2015 Rate | 14.68% | 11.01% |
| Maximum July 1, 2015 Rate | 22.02% | 25.69% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 27 | 30 |
| Amortization factor | 16.348 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.83% | 6.36% | 6.36% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.35% | 8.06% | 8.06% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $566,542,042 | $573,884,600 | $7,342,558 | 99% | $100,861,922 | 7% |
| 12/31/2007 | 601,533,690 | 591,352,945 | (10,180,745) | 102% | 102,505,876 | (10%) |
| 12/31/2008 | 452,197,009 | 606,617,813 | 154,420,804 | 75% | 109,890,242 | 141% |
| 12/31/2009 | 513,839,640 | 635,968,542 | 122,128,902 | 81% | 113,373,891 | 108% |
| 12/31/2010 | 548,929,719 | 669,985,910 | 121,056,191 | 82% | 119,256,210 | 102% |
| 12/31/2011 | 538,168,129 | 693,798,252 | 155,630,123 | 78% | 119,485,687 | 130% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Clackamas County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $155,630,123 | $121,056,191 |
| Allocated pooled OPSRP UAL | 2,038,709 | 1,480,714 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 157,668,832 | 122,536,905 |
| Combined valuation payroll | 119,485,687 | 119,256,210 |
| Net pension UAL as a percentage of payroll | 132% | 103% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,095,337 | $4,290,650 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $7,934,524 | $7,784,505 |
| Tier 1/Tier 2 valuation payroll | 77,123,747 | 80,558,431 |
| Tier 1/Tier 2 pension normal cost rate | 10.29% | 9.66% |
| Tier 1/ Tier 2 Actuarial accrued liability | $693,798,252 | $669,985,910 |
| Actuarial asset value | 538,168,129 | 548,929,719 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 155,630,123 | 121,056,191 |
| Tier 1/ Tier 2 Funded status | 78% | 82% |
| Combined valuation payroll | $119,485,687 | $119,256,210 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 130% | 102% |
| Tier 1/Tier 2 UAL rate | 8.06% | 7.75% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1,095 | 1,168 |
| Tier 1/Tier 2 dormant members | 591 | 578 |
| Tier 1/Tier 2 retirees and beneficiaries | 1,543 | 1,446 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 119,485,687 | 119,256,210 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $89,336,869 | $99,257,558 |
| 2. Employer reserves | 226,063,843 | 228,083,270 |
| 3. Benefits in force reserve | 222,767,417 | 221,588,891 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$538,168,129** | **$548,929,719** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $548,929,719 |
| 2. Regular employer contributions | 12,302,499 |
| 3. Benefit payments and expenses | (37,323,143) |
| 4. Adjustments[2] | (1,094,580) |
| 5. Interest credited | 15,353,634 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$538,168,129** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $2,082,475 | $2,235,627 |
| Tier 1 General Service | 1,720,891 | 1,583,410 |
| Tier 2 Police & Fire | 1,365,520 | 1,286,128 |
| Tier 2 General Service | 2,765,638 | 2,679,340 |
| **Total** | **$7,934,524** | **$7,784,505** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $7,934,524 | $7,934,524 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $56,775,033 | $62,503,361 |
| ▪ Tier 1 General Service | 134,962,087 | 145,013,997 |
| ▪ Tier 2 Police & Fire | 15,209,361 | 13,076,889 |
| ▪ Tier 2 General Service | 37,277,103 | 34,216,702 |
| ▪ **Total Active Members** | **$244,223,584** | **$254,810,949** |
| Dormant Members | 44,419,518 | 50,317,249 |
| Retired Members and Beneficiaries | 405,155,150 | 364,857,712 |
| **Total Actuarial Accrued Liability** | **$693,798,252** | **$669,985,910** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $693,798,252 | $693,798,252 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $693,798,252 | $669,985,910 |
| 2. Actuarial value of assets | 538,168,129 | 548,929,719 |
| 3. Unfunded accrued liability *(1. – 2.)* | 155,630,123 | 121,056,191 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 82% |
| 5. Combined valuation payroll | $119,485,687 | $119,256,210 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 130% | 102% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($25,475,929) | ($2,099,490) | ($1,948,703) | ($25,325,142) | ($2,178,221) |
| December 31, 2009 | $148,115,174 | $11,314,443 | $11,367,577 | $148,168,308 | $11,738,735 |
| December 31, 2011 | N/A | N/A | N/A | $32,786,957 | $2,421,310 |
| **Total** | | | | **$155,630,123** | **$11,981,824** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $669,985,910 |
| b. Normal cost at December 31, 2010 | 7,784,505 |
| c. Benefit payments during 2011 | (37,078,505) |
| d. Interest at 8.0% to December 31, 2011 | 52,738,493 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 693,430,403 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 693,430,403 |
| 2. Actuarial accrued liability at December 31, 2011 | 693,798,252 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (367,849) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 548,929,719 |
| b. Contributions for 2011[1] | 12,302,499 |
| c. Benefit payments and expenses during 2011 | (37,323,143) |
| d. Interest at 8.0% to December 31, 2011 | 42,913,552 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 566,822,626 |
| 5. Actuarial value of assets at December 31, 2011 | 538,168,129 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (28,654,498) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($29,022,347)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$121,056,191** |
| 2. Expected increase | 5,551,585 |
| 3. Liability (gain)/loss | 367,849 |
| 4. Asset (gain)/loss | 28,654,498 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$155,630,123** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $2,082,475 | $12,890,507 | 16.16% | $2,235,627 | $14,553,546 | 15.36% |
| Tier 1 General Service | 1,720,891 | 28,963,349 | 5.94% | 1,583,410 | 30,459,556 | 5.20% |
| Tier 2 Police & Fire | 1,365,520 | 9,213,933 | 14.82% | 1,286,128 | 9,019,468 | 14.26% |
| Tier 2 General Service | 2,765,638 | 26,055,958 | 10.61% | 2,679,340 | 26,525,861 | 10.10% |
| **Total** | **$7,934,524** | **$77,123,747** | **10.29%** | **$7,784,505** | **$80,558,431** | **9.66%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $155,630,123 | $121,056,191 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 11,981,824 | 9,098,045 |
| 3. Combined valuation payroll | 119,485,687 | 119,256,210 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 10.03% | 7.63% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.29% | 9.66% |
| b. Tier 1/Tier 2 UAL rate | 10.03% | 7.63% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 20.45% | 17.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 14.75% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.75% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.95% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 78% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.60% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.15% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 18.35% |
| 7. | July 1, 2013 total pension rate, before adjustment | 20.45% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.10%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 10.03% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 7.93% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 18.35% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.29% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.29% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 18.35% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.29% | 9.66% |
| b. Tier 1/Tier 2 UAL rate | 7.93% | 7.63% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 18.35% | 17.41% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $28,963,349 | $12,890,507 | $41,853,856 |
| Tier 2 | 26,055,958 | 9,213,933 | 35,269,891 |
| Tier 1/Tier 2 valuation payroll | 55,019,307 | 22,104,440 | 77,123,747 |
| OPSRP valuation payroll | 32,730,295 | 9,631,645 | 42,361,940 |
| **Combined valuation payroll** | **$87,749,602** | **$31,736,085** | **$119,485,687** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 425 | 426 | 668 | 1,519 | 464 | 448 | 676 | 1,588 |
| Police & Fire | 135 | 109 | 137 | 381 | 150 | 106 | 125 | 381 |
| Total | 560 | 535 | 805 | 1,900 | 614 | 554 | 801 | 1,969 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 275 | 196 | N/A | 471 | 316 | 231 | N/A | 547 |
| Police & Fire | 34 | 33 | N/A | 67 | 38 | 40 | N/A | 78 |
| Total | 309 | 229 | N/A | 538 | 354 | 271 | N/A | 625 |
| **Dormant Members** | | | | | | | | |
| General Service | 309 | 232 | 43 | 584 | 318 | 214 | 24 | 556 |
| Police & Fire | 26 | 24 | 2 | 52 | 28 | 18 | 1 | 47 |
| Total | 335 | 256 | 45 | 636 | 346 | 232 | 25 | 603 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1,178 | 68 | 5 | 1,251 | 1,120 | 48 | 2 | 1,170 |
| Police & Fire | 283 | 14 | 0 | 297 | 275 | 3 | 0 | 278 |
| Total | 1,461 | 82 | 5 | 1,548 | 1,395 | 51 | 2 | 1,448 |
| **Grand Total Number of Members** | **2,665** | **1,102** | **855** | **4,622** | **2,709** | **1,108** | **828** | **4,645** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | 1 | 3 | | | | | | | | 4 |
| 30-34 | 1 | 22 | 23 | | | | | | | 46 |
| 35-39 | | 25 | 75 | 17 | | | | | | 117 |
| 40-44 | 1 | 25 | 67 | 68 | 14 | | | | | 175 |
| 45-49 | | 20 | 62 | 60 | 39 | 8 | | | | 189 |
| 50-54 | | 16 | 54 | 44 | 35 | 18 | 7 | | | 174 |
| 55-59 | | 9 | 57 | 54 | 43 | 32 | 17 | | | 212 |
| 60-64 | | 11 | 42 | 26 | 37 | 16 | 3 | 2 | | 137 |
| 65-69 | | 1 | 12 | 9 | 7 | 2 | 1 | | | 32 |
| 70-74 | | | 2 | 2 | 2 | | | | | 6 |
| 75+ | | | 2 | | | | | | 1 | 3 |
| Total | 3 | 132 | 396 | 280 | 177 | 76 | 28 | 2 | 1 | 1,095 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | 1 | 108 |
| 25-29 | 5 | 309 |
| 30-34 | 22 | 324 |
| 35-39 | 40 | 940 |
| 40-44 | 95 | 1,189 |
| 45-49 | 70 | 1,303 |
| 50-54 | 95 | 1,087 |
| 55-59 | 113 | 799 |
| 60-64 | 91 | 626 |
| 65-69 | 43 | 594 |
| 70-74 | 9 | 363 |
| 75+ | 7 | 340 |
| Total | 591 | 901 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 7 | 1,260 |
| 45-49 | 14 | 1,706 |
| 50-54 | 30 | 3,040 |
| 55-59 | 150 | 2,127 |
| 60-64 | 379 | 2,109 |
| 65-69 | 404 | 1,958 |
| 70-74 | 241 | 1,628 |
| 75-79 | 150 | 1,330 |
| 80-84 | 88 | 1,124 |
| 85-89 | 53 | 1,087 |
| 90-94 | 23 | 826 |
| 95-99 | 4 | 288 |
| 100+ | | |
| Total | 1,543 | 1,816 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Clackamas River Water Providers/2870
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Clackamas River Water Providers/2870

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS
### CLACKAMAS RIVER WATER PROVIDERS -- #2870

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Clackamas River Water Providers to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Clackamas River Water Providers.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Clackamas River Water Providers*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.61% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.16% | 0.16% | 0.16% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **7.92%** | **6.58%** | **9.31%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **8.51%** | **7.07%** | **9.80%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 91%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 7.77% | 7.77% |
| Minimum July 1, 2015 Rate | 4.77% | 1.77% |
| Maximum July 1, 2015 Rate | 10.77% | 13.77% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 17 | N/A |
| Amortization factor | 12.037 | N/A |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | N/A | N/A | N/A |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.77% | 0.16% | 0.16% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $0 | $0 | $0 | 0% | $0 | 0% |
| 12/31/2007 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2008 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2009 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2010 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2011 | 5,724 | 6,294 | 570 | 91% | 137,485 | 0% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Clackamas River Water Providers*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $570 | $0 |
| Allocated pooled OPSRP UAL | 2,346 | 0 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,916 | 0 |
| Combined valuation payroll | 137,485 | 0 |
| Net pension UAL as a percentage of payroll | 2% | 0% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,562 | $0 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5,778 | $0 |
| Tier 1/Tier 2 valuation payroll | 75,955 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 7.61% | 0.00% |
| Tier 1/ Tier 2 Actuarial accrued liability | $6,294 | $0 |
| Actuarial asset value | 5,724 | 0 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 570 | 0 |
| Tier 1/ Tier 2 Funded status | 91% | 0% |
| Combined valuation payroll | $137,485 | $0 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 0% | 0% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 0.16% | 0.00% |
| Tier 1/Tier 2 active members [1] | 1 | 0 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 137,485 | 0 |
| 3. Amortization factor | 11.626 | 0.000 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $0 | $0 |
| 2. Employer reserves | 5,724 | 0 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$5,724** | **$0** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $2,079 |
| 2. | Regular employer contributions | 3,575 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments [2] | (57) |
| 5. | Interest credited | 127 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$5,724** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 5,778 | 0 |
| **Total** | **$5,778** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $5,778 | $5,778 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 6,294 | 0 |
| ▪ **Total Active Members** | **$6,294** | **$0** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$6,294** | **$0** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $6,294 | $6,294 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $6,294 | $0 |
| 2. Actuarial value of assets | 5,724 | 0 |
| 3. Unfunded accrued liability *(1. – 2.)* | 570 | 0 |
| 4. Funded percentage *(2. ÷ 1.)* | 91% | 0% |
| 5. Combined valuation payroll | $137,485 | $0 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 0% | 0% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $0 | $0 | $0 | $0 | $0 |
| December 31, 2009 | $0 | $0 | $0 | $0 | $0 |
| December 31, 2011 | N/A | N/A | N/A | $570 | $42 |
| **Total** | | | | **$570** | **$42** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $2,361 |
| b. Normal cost at December 31, 2010 | 3,370 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 458 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 6,189 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 6,189 |
| 2. Actuarial accrued liability at December 31, 2011 | 6,294 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (105) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,079 |
| b. Contributions for 2011[1] | 3,575 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 309 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 5,963 |
| 5. Actuarial value of assets at December 31, 2011 | 5,724 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (239) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($344)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$282** |
| 2. Expected increase | (56) |
| 3. Liability (gain)/loss | 105 |
| 4. Asset (gain)/loss | 239 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$570** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | **December 31, 2011** | | | **December 31, 2010** | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 5,778 | 75,955 | 7.61% | 0 | 0 | 0.00% |
| **Total** | **$5,778** | **$75,955** | **7.61%** | **$0** | **$0** | **0.00%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $570 | $0 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 42 | 0 |
| 3. Combined valuation payroll | 137,485 | 0 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.03% | 0.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.61% | N/A |
| b. Tier 1/Tier 2 UAL rate | 0.03% | N/A |
| c. Multnomah Fire District #10 rate | 0.13% | N/A |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 7.77% | N/A |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 7.77% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.77% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | N/A |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | N/A |
| | c. Funded percentage | N/A |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | N/A |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | N/A |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | N/A |
| 7. | July 1, 2013 total pension rate, before adjustment | N/A |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | N/A |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | N/A |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | N/A |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | N/A |
| 12. | Tier 1/Tier 2 retiree healthcare rate | N/A |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | N/A |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | N/A |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | N/A |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | N/A |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.61% | N/A |
| b. Tier 1/Tier 2 UAL rate | 0.03% | N/A |
| c. Multnomah Fire District #10 rate | 0.13% | N/A |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 7.77% | N/A |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 75,955 | 0 | 75,955 |
| Tier 1/Tier 2 valuation payroll | 75,955 | 0 | 75,955 |
| OPSRP valuation payroll | 61,530 | 0 | 61,530 |
| **Combined valuation payroll** | **$137,485** | **$0** | **$137,485** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **1** | **1** | **2** | **0** | **1** | **1** | **2** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | 1 | | | | | | | 1 |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | 1 | | | | | | | 1 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Columbia River Public Utility District/2679
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Columbia River Public Utility District/2679

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Columbia River Public Utility District -- #2679

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Columbia River Public Utility District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Columbia River Public Utility District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Columbia River Public Utility District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.96% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.08% | 4.08% | 4.08% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **12.19%** | **10.50%** | **13.23%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.78%** | **10.99%** | **13.72%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 83%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.04% | 12.04% |
| Minimum July 1, 2015 Rate | 9.04% | 6.04% |
| Maximum July 1, 2015 Rate | 15.04% | 18.04% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 19 | 21 |
| Amortization factor | 13.173 | 13.998 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.28% | 3.67% | 3.67% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.04% | 4.08% | 4.08% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $11,241,260 | $11,091,449 | ($149,812) | 101% | $3,098,324 | (5%) |
| 12/31/2007 | 11,946,047 | 11,559,613 | (386,434) | 103% | 3,346,090 | (12%) |
| 12/31/2008 | 9,237,840 | 11,926,365 | 2,688,525 | 77% | 3,627,190 | 74% |
| 12/31/2009 | 10,976,475 | 12,944,562 | 1,968,087 | 85% | 3,947,347 | 50% |
| 12/31/2010 | 12,073,472 | 14,110,150 | 2,036,678 | 86% | 3,977,426 | 51% |
| 12/31/2011 | 11,614,143 | 13,958,378 | 2,344,235 | 83% | 4,487,797 | 52% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Columbia River Public Utility District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $2,344,235 | $2,036,678 |
| Allocated pooled OPSRP UAL | 76,572 | 49,385 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,420,807 | 2,086,063 |
| Combined valuation payroll | 4,487,797 | 3,977,426 |
| Net pension UAL as a percentage of payroll | 54% | 52% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $116,259 | $143,101 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $220,580 | $210,266 |
| Tier 1/Tier 2 valuation payroll | 2,772,392 | 2,815,879 |
| Tier 1/Tier 2 pension normal cost rate | 7.96% | 7.47% |
| Tier 1/ Tier 2 Actuarial accrued liability | $13,958,378 | $14,110,150 |
| Actuarial asset value | 11,614,143 | 12,073,472 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 2,344,235 | 2,036,678 |
| Tier 1/ Tier 2 Funded status | 83% | 86% |
| Combined valuation payroll | $4,487,797 | $3,977,426 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 52% | 51% |
| Tier 1/Tier 2 UAL rate | 4.08% | 3.88% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 29 | 30 |
| Tier 1/Tier 2 dormant members | 14 | 15 |
| Tier 1/Tier 2 retirees and beneficiaries | 13 | 13 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 4,487,797 | 3,977,426 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $3,131,146 | $3,407,650 |
| 2. Employer reserves | 6,303,651 | 6,286,723 |
| 3. Benefits in force reserve | 2,179,345 | 2,379,099 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$11,614,143** | **$12,073,472** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $12,073,472 |
| 2. Regular employer contributions | 308,220 |
| 3. Benefit payments and expenses | (365,134) |
| 4. Adjustments[2] | (727,686) |
| 5. Interest credited | 325,271 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$11,614,143** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 100,013 | 92,658 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 120,567 | 117,608 |
| **Total** | **$220,580** | **$210,266** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $220,580 | $220,580 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 5,872,946 | 5,751,997 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 1,545,365 | 1,353,083 |
| ▪ **Total Active Members** | **$7,418,311** | **$7,105,080** |
| Dormant Members | 2,576,412 | 3,087,758 |
| Retired Members and Beneficiaries | 3,963,655 | 3,917,312 |
| **Total Actuarial Accrued Liability** | **$13,958,378** | **$14,110,150** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $13,958,378 | $13,958,378 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $13,958,378 | $14,110,150 |
| 2. Actuarial value of assets | 11,614,143 | 12,073,472 |
| 3. Unfunded accrued liability *(1. – 2.)* | 2,344,235 | 2,036,678 |
| 4. Funded percentage *(2. ÷ 1.)* | 83% | 86% |
| 5. Combined valuation payroll | $4,487,797 | $3,977,426 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 52% | 51% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,000,364) | ($82,441) | ($76,520) | ($994,443) | ($85,533) |
| December 31, 2009 | $2,979,990 | $227,640 | $228,709 | $2,981,059 | $236,177 |
| December 31, 2011 | N/A | N/A | N/A | $357,619 | $26,410 |
| **Total** | | | | **$2,344,235** | **$177,054** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $14,110,150 |
| b. Normal cost at December 31, 2010 | 210,266 |
| c. Benefit payments during 2011 | (362,741) |
| d. Interest at 8.0% to December 31, 2011 | 1,131,124 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 15,088,799 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 15,088,799 |
| 2. Actuarial accrued liability at December 31, 2011 | 13,958,378 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 1,130,421 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 12,073,472 |
| b. Contributions for 2011[1] | 308,220 |
| c. Benefit payments and expenses during 2011 | (365,134) |
| d. Interest at 8.0% to December 31, 2011 | 963,601 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 12,980,159 |
| 5. Actuarial value of assets at December 31, 2011 | 11,614,143 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,366,016) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($235,595)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,036,678** |
| 2. Expected increase | 71,962 |
| 3. Liability (gain)/loss | (1,130,421) |
| 4. Asset (gain)/loss | 1,366,016 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$2,344,235** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 100,013 | 1,567,700 | 6.38% | 92,658 | 1,554,891 | 5.96% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 120,567 | 1,204,692 | 10.01% | 117,608 | 1,260,988 | 9.33% |
| **Total** | **$220,580** | **$2,772,392** | **7.96%** | **$210,266** | **$2,815,879** | **7.47%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $2,344,235 | $2,036,678 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 177,054 | 149,412 |
| 3. Combined valuation payroll | 4,487,797 | 3,977,426 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.95% | 3.76% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.96% | 7.47% |
| b. Tier 1/Tier 2 UAL rate | 3.95% | 3.76% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 12.04% | 11.35% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.28% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.28% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.06% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 83% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.28% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.28% |
| 7. July 1, 2013 total pension rate, before adjustment | 12.04% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.95% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.95% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.04% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.96% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.96% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.96% | 7.47% |
| b. Tier 1/Tier 2 UAL rate | 3.95% | 3.76% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 12.04% | 11.35% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,567,700 | $0 | $1,567,700 |
| Tier 2 | 1,204,692 | 0 | 1,204,692 |
| Tier 1/Tier 2 valuation payroll | 2,772,392 | 0 | 2,772,392 |
| OPSRP valuation payroll | 1,715,405 | 0 | 1,715,405 |
| **Combined valuation payroll** | **$4,487,797** | **$0** | **$4,487,797** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 16 | 13 | 22 | 51 | 16 | 14 | 15 | 45 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 16 | 13 | 22 | 51 | 16 | 14 | 15 | 45 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 4 | N/A | 4 | 1 | 4 | N/A | 5 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 4 | N/A | 4 | 1 | 4 | N/A | 5 |
| **Dormant Members** | | | | | | | | |
| General Service | 8 | 6 | 0 | 14 | 9 | 6 | 0 | 15 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 8 | 6 | 0 | 14 | 9 | 6 | 0 | 15 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 12 | 1 | 0 | 13 | 12 | 1 | 0 | 13 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 12 | 1 | 0 | 13 | 12 | 1 | 0 | 13 |
| **Grand Total Number of Members** | **36** | **24** | **22** | **82** | **38** | **25** | **15** | **78** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 1 | | 1 | | | | | | **2** |
| **40-44** | | 1 | 5 | | 1 | | | | | **7** |
| **45-49** | | | 3 | | 1 | | | | | **4** |
| **50-54** | | | | 2 | 1 | 1 | | | | **4** |
| **55-59** | | 2 | 1 | 1 | 3 | 4 | | | | **11** |
| **60-64** | | | | | 1 | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **4** | **9** | **4** | **7** | **5** | | | | **29** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 2 | 1,465 |
| **40-44** | 3 | 1,258 |
| **45-49** | 3 | 1,907 |
| **50-54** | 3 | 1,982 |
| **55-59** | 3 | 3,061 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 14 | 1,968 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 2,974 |
| **55-59** | 1 | 2,959 |
| **60-64** | 2 | 1,489 |
| **65-69** | 6 | 2,545 |
| **70-74** | 1 | 153 |
| **75-79** | 1 | 253 |
| **80-84** | 1 | 396 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 13 | 1,922 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Curry County/2002
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Curry County/2002

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Curry County/2002

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Curry County -- #2002

**Secondary Employers**

2034 Curry County General Hospital

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Curry County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Curry County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Curry County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.30% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 7.75% | 7.75% | 7.75% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.20%** | **14.17%** | **16.90%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.79%** | **14.66%** | **17.39%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 82%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.05% | 17.05% |
| Minimum July 1, 2015 Rate | 13.64% | 10.23% |
| Maximum July 1, 2015 Rate | 20.46% | 23.87% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.85% | 6.15% | 6.15% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.11% | 8.81% | 8.81% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $46,770,528 | $46,395,784 | ($374,743) | 101% | $7,856,883 | (5%) |
| 12/31/2007 | 49,435,034 | 47,921,529 | (1,513,505) | 103% | 7,152,159 | (21%) |
| 12/31/2008 | 37,521,676 | 48,686,859 | 11,165,183 | 77% | 7,358,990 | 152% |
| 12/31/2009 | 42,368,434 | 51,342,325 | 8,973,891 | 83% | 8,625,316 | 104% |
| 12/31/2010 | 44,773,178 | 52,653,513 | 7,880,335 | 85% | 8,242,417 | 96% |
| 12/31/2011 | 43,857,781 | 53,518,685 | 9,660,904 | 82% | 6,452,202 | 150% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Curry County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $9,660,904 | $7,880,335 |
| Allocated pooled OPSRP UAL | 110,090 | 102,340 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 9,770,994 | 7,982,675 |
| Combined valuation payroll | 6,452,202 | 8,242,417 |
| Net pension UAL as a percentage of payroll | 151% | 97% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $167,148 | $296,549 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $336,014 | $440,218 |
| Tier 1/Tier 2 valuation payroll | 3,614,799 | 4,699,863 |
| Tier 1/Tier 2 pension normal cost rate | 9.30% | 9.37% |
| Tier 1/ Tier 2 Actuarial accrued liability | $53,518,685 | $52,653,513 |
| Actuarial asset value | 43,857,781 | 44,773,178 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 9,660,904 | 7,880,335 |
| Tier 1/ Tier 2 Funded status | 82% | 85% |
| Combined valuation payroll | $6,452,202 | $8,242,417 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 150% | 96% |
| Tier 1/Tier 2 UAL rate | 7.75% | 7.26% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 71 | 93 |
| Tier 1/Tier 2 dormant members | 103 | 92 |
| Tier 1/Tier 2 retirees and beneficiaries | 249 | 245 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 6,452,202 | 8,242,417 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $9,895,293 | $10,187,810 |
| 2. Employer reserves | 20,276,826 | 20,317,290 |
| 3. Benefits in force reserve | 13,685,662 | 14,268,078 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$43,857,781** | **$44,773,178** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $44,773,178 |
| 2. | Regular employer contributions | 635,445 |
| 3. | Benefit payments and expenses | (2,292,938) |
| 4. | Adjustments[2] | (657,437) |
| 5. | Interest credited | 1,399,534 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$43,857,781** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $96,442 | $96,517 |
| Tier 1 General Service | 42,324 | 65,365 |
| Tier 2 Police & Fire | 83,761 | 97,756 |
| Tier 2 General Service | 113,487 | 180,580 |
| **Total** | **$336,014** | **$440,218** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $336,014 | $336,014 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $3,903,769 | $4,309,819 |
| ▪ Tier 1 General Service | 13,856,461 | 14,400,218 |
| ▪ Tier 2 Police & Fire | 1,285,695 | 1,175,047 |
| ▪ Tier 2 General Service | 1,814,184 | 2,477,464 |
| ▪ **Total Active Members** | **$20,860,109** | **$22,362,548** |
| Dormant Members | 7,767,968 | 6,797,828 |
| Retired Members and Beneficiaries | 24,890,608 | 23,493,137 |
| **Total Actuarial Accrued Liability** | **$53,518,685** | **$52,653,513** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $53,518,685 | $53,518,685 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $53,518,685 | $52,653,513 |
| 2. Actuarial value of assets | 43,857,781 | 44,773,178 |
| 3. Unfunded accrued liability *(1. – 2.)* | 9,660,904 | 7,880,335 |
| 4. Funded percentage *(2. ÷ 1.)* | 82% | 85% |
| 5. Combined valuation payroll | $6,452,202 | $8,242,417 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 150% | 96% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($2,754,668) | ($227,014) | ($210,710) | ($2,738,364) | ($235,527) |
| December 31, 2009 | $11,771,019 | $899,183 | $903,405 | $11,775,241 | $932,902 |
| December 31, 2011 | N/A | N/A | N/A | $624,027 | $46,084 |
| **Total** | | | | **$9,660,904** | **$743,459** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $52,653,513 |
| b. Normal cost at December 31, 2010 | 440,218 |
| c. Benefit payments during 2011 | (2,277,909) |
| d. Interest at 8.0% to December 31, 2011 | 4,156,382 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 54,972,204 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 54,972,204 |
| 2. Actuarial accrued liability at December 31, 2011 | 53,518,685 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 1,453,519 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 44,773,178 |
| b. Contributions for 2011[1] | 635,445 |
| c. Benefit payments and expenses during 2011 | (2,292,938) |
| d. Interest at 8.0% to December 31, 2011 | 3,515,554 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 46,631,239 |
| 5. Actuarial value of assets at December 31, 2011 | 43,857,781 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (2,773,458) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($1,319,939)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$7,880,335** |
| 2. Expected increase | 460,630 |
| 3. Liability (gain)/loss | (1,453,519) |
| 4. Asset (gain)/loss | 2,773,458 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$9,660,904** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $96,442 | $626,516 | 15.39% | $96,517 | $668,014 | 14.45% |
| Tier 1 General Service | 42,324 | 1,533,949 | 2.76% | 65,365 | 1,947,961 | 3.36% |
| Tier 2 Police & Fire | 83,761 | 516,585 | 16.21% | 97,756 | 618,761 | 15.80% |
| Tier 2 General Service | 113,487 | 937,749 | 12.10% | 180,580 | 1,465,127 | 12.33% |
| **Total** | **$336,014** | **$3,614,799** | **9.30%** | **$440,218** | **$4,699,863** | **9.37%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $9,660,904 | $7,880,335 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 743,459 | 588,274 |
| 3. Combined valuation payroll | 6,452,202 | 8,242,417 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 11.52% | 7.14% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.30% | 9.37% |
| b. Tier 1/Tier 2 UAL rate | 11.52% | 7.14% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 20.95% | 16.63% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 14.05% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.05% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.81% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 82% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.05% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 17.05% |
| 7. July 1, 2013 total pension rate, before adjustment | 20.95% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.90%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 11.52% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 7.62% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.05% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.30% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.30% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.05% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.30% | 9.37% |
| b. Tier 1/Tier 2 UAL rate | 7.62% | 7.14% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 17.05% | 16.63% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,533,949 | $626,516 | $2,160,465 |
| Tier 2 | 937,749 | 516,585 | 1,454,334 |
| Tier 1/Tier 2 valuation payroll | 2,471,698 | 1,143,101 | 3,614,799 |
| OPSRP valuation payroll | 2,236,553 | 600,850 | 2,837,403 |
| **Combined valuation payroll** | **$4,708,251** | **$1,743,951** | **$6,452,202** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 29 | 21 | 59 | 109 | 37 | 32 | 86 | 155 |
| Police & Fire | 12 | 9 | 15 | 36 | 13 | 11 | 11 | 35 |
| Total | 41 | 30 | 74 | 145 | 50 | 43 | 97 | 190 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 35 | 16 | N/A | 51 | 40 | 22 | N/A | 62 |
| Police & Fire | 13 | 11 | N/A | 24 | 15 | 10 | N/A | 25 |
| Total | 48 | 27 | N/A | 75 | 55 | 32 | N/A | 87 |
| **Dormant Members** | | | | | | | | |
| General Service | 38 | 53 | 21 | 112 | 33 | 47 | 5 | 85 |
| Police & Fire | 8 | 4 | 2 | 14 | 8 | 4 | 1 | 13 |
| Total | 46 | 57 | 23 | 126 | 41 | 51 | 6 | 98 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 190 | 14 | 0 | 204 | 193 | 11 | 0 | 204 |
| Police & Fire | 43 | 2 | 0 | 45 | 39 | 2 | 0 | 41 |
| Total | 233 | 16 | 0 | 249 | 232 | 13 | 0 | 245 |
| **Grand Total Number of Members** | **368** | **130** | **97** | **595** | **378** | **139** | **103** | **620** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | 1 | | 1 | 1 | | | | | | **3** |
| **40-44** | 1 | 2 | 3 | 3 | 2 | | | | | **11** |
| **45-49** | | 2 | 4 | 3 | 1 | | | | | **10** |
| **50-54** | | 1 | 1 | 1 | 5 | 1 | 1 | | | **10** |
| **55-59** | | 2 | 6 | | 5 | 5 | 1 | 3 | | **22** |
| **60-64** | | | 3 | | 5 | 1 | | | | **9** |
| **65-69** | | 2 | 1 | 2 | | 1 | | | | **6** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | **2** | **9** | **19** | **10** | **18** | **8** | **2** | **3** | | **71** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 1 | 70 |
| **35-39** | 1 | 98 |
| **40-44** | 7 | 734 |
| **45-49** | 4 | 472 |
| **50-54** | 20 | 1,054 |
| **55-59** | 26 | 716 |
| **60-64** | 29 | 520 |
| **65-69** | 11 | 668 |
| **70-74** | 2 | 169 |
| **75+** | 2 | 1,350 |
| **Total** | 103 | 703 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 4 | 347 |
| **55-59** | 12 | 1,251 |
| **60-64** | 34 | 813 |
| **65-69** | 56 | 916 |
| **70-74** | 49 | 1,021 |
| **75-79** | 39 | 414 |
| **80-84** | 25 | 510 |
| **85-89** | 19 | 451 |
| **90-94** | 9 | 234 |
| **95-99** | 2 | 198 |
| **100+** | | |
| **Total** | 249 | 744 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Deschutes Public Library District/2828
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Deschutes Public Library District/2828

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

Deschutes Public Library District -- #2828

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Deschutes Public Library District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Deschutes Public Library District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Deschutes Public Library District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.77% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 1.61% | 1.61% | 1.61% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.53%** | **8.03%** | **10.76%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.12%** | **8.52%** | **11.25%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 85%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.38% | 11.38% |
| Minimum July 1, 2015 Rate | 8.38% | 5.38% |
| Maximum July 1, 2015 Rate | 14.38% | 17.38% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 23 | 30 |
| Amortization factor | 14.831 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.02% | 0.81% | 0.81% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.38% | 1.61% | 1.61% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $3,623,829 | $2,586,879 | ($1,036,950) | 140% | $3,467,051 | (30%) |
| 12/31/2007 | 4,160,466 | 3,022,986 | (1,137,480) | 138% | 3,560,695 | (32%) |
| 12/31/2008 | 3,161,153 | 3,612,587 | 451,434 | 88% | 3,390,752 | 13% |
| 12/31/2009 | 3,825,441 | 4,265,062 | 439,621 | 90% | 3,541,986 | 12% |
| 12/31/2010 | 4,331,306 | 4,802,931 | 471,625 | 90% | 3,845,887 | 12% |
| 12/31/2011 | 4,460,613 | 5,277,704 | 817,091 | 85% | 3,653,084 | 22% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Deschutes Public Library District*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31 2011 | December 31 2010 |
| T1/T2 UAL | $817,091 | $471,625 |
| Allocated pooled OPSRP UAL | 62,330 | 47,751 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 879,421 | 519,376 |
| Combined valuation payroll | 3,653,084 | 3,845,887 |
| Net pension UAL as a percentage of payroll | 24% | 14% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $94,635 | $138,369 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $236,232 | $236,467 |
| Tier 1/Tier 2 valuation payroll | 2,417,332 | 2,493,019 |
| Tier 1/Tier 2 pension normal cost rate | 9.77% | 9.49% |
| Tier 1/ Tier 2 Actuarial accrued liability | $5,277,704 | $4,802,931 |
| Actuarial asset value | 4,460,613 | 4,331,306 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 817,091 | 471,625 |
| Tier 1/ Tier 2 Funded status | 85% | 90% |
| Combined valuation payroll | $3,653,084 | $3,845,887 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 22% | 12% |
| Tier 1/Tier 2 UAL rate | 1.61% | 0.85% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 53 | 57 |
| Tier 1/Tier 2 dormant members | 24 | 20 |
| Tier 1/Tier 2 retirees and beneficiaries | 15 | 14 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 3,653,084 | 3,845,887 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $668,361 | $697,651 |
| 2. Employer reserves | 3,172,436 | 2,976,301 |
| 3. Benefits in force reserve | 619,816 | 657,354 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$4,460,613** | **$4,331,306** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $4,331,306 |
| 2. Regular employer contributions | 181,558 |
| 3. Benefit payments and expenses | (103,846) |
| 4. Adjustments[2] | (50,760) |
| 5. Interest credited | 102,354 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$4,460,613** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 44,070 | 40,460 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 192,162 | 196,007 |
| **Total** | **$236,232** | **$236,467** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $236,232 | $236,232 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 1,160,987 | 1,046,286 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 2,483,407 | 2,352,858 |
| ▪ **Total Active Members** | **$3,644,394** | **$3,399,144** |
| Dormant Members | 506,028 | 321,420 |
| Retired Members and Beneficiaries | 1,127,282 | 1,082,367 |
| **Total Actuarial Accrued Liability** | **$5,277,704** | **$4,802,931** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $5,277,704 | $5,277,704 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $5,277,704 | $4,802,931 |
| 2. Actuarial value of assets | 4,460,613 | 4,331,306 |
| 3. Unfunded accrued liability *(1. – 2.)* | 817,091 | 471,625 |
| 4. Funded percentage *(2. ÷ 1.)* | 85% | 90% |
| 5. Combined valuation payroll | $3,653,084 | $3,845,887 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 22% | 12% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,315,777) | ($108,434) | ($100,646) | ($1,307,989) | ($112,500) |
| December 31, 2009 | $1,764,114 | $134,760 | $135,393 | $1,764,747 | $139,814 |
| December 31, 2011 | N/A | N/A | N/A | $360,333 | $26,611 |
| **Total** | | | | **$817,091** | **$53,925** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $4,802,931 |
| b. Normal cost at December 31, 2010 | 236,467 |
| c. Benefit payments during 2011 | (103,165) |
| d. Interest at 8.0% to December 31, 2011 | 399,025 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 5,335,258 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 5,335,258 |
| 2. Actuarial accrued liability at December 31, 2011 | 5,277,704 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 57,554 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 4,331,306 |
| b. Contributions for 2011[1] | 181,558 |
| c. Benefit payments and expenses during 2011 | (103,846) |
| d. Interest at 8.0% to December 31, 2011 | 349,613 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 4,758,632 |
| 5. Actuarial value of assets at December 31, 2011 | 4,460,613 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (298,019) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($240,465)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$471,625** |
| 2. Expected increase | 105,001 |
| 3. Liability (gain)/loss | (57,554) |
| 4. Asset (gain)/loss | 298,019 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$817,091** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 44,070 | 624,868 | 7.05% | 40,460 | 612,799 | 6.60% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 192,162 | 1,792,464 | 10.72% | 196,007 | 1,880,220 | 10.42% |
| **Total** | **$236,232** | **$2,417,332** | **9.77%** | **$236,467** | **$2,493,019** | **9.49%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $817,091 | $471,625 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 53,925 | 28,046 |
| 3. Combined valuation payroll | 3,653,084 | 3,845,887 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 1.48% | 0.73% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.77% | 9.49% |
| b. Tier 1/Tier 2 UAL rate | 1.48% | 0.73% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 11.38% | 10.34% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 9.24% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.24% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.85% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 85% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 6.24% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 12.24% |
| 7. | July 1, 2013 total pension rate, before adjustment | 11.38% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 1.48% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.48% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.38% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.77% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.77% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.38% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.77% | 9.49% |
| b. Tier 1/Tier 2 UAL rate | 1.48% | 0.73% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 11.38% | 10.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $624,868 | $0 | $624,868 |
| Tier 2 | 1,792,464 | 0 | 1,792,464 |
| Tier 1/Tier 2 valuation payroll | 2,417,332 | 0 | 2,417,332 |
| OPSRP valuation payroll | 1,235,752 | 0 | 1,235,752 |
| **Combined valuation payroll** | **$3,653,084** | **$0** | **$3,653,084** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 15 | 38 | 40 | 93 | 15 | 42 | 49 | 106 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 15 | 38 | 40 | 93 | 15 | 42 | 49 | 106 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 3 | 5 | N/A | 8 | 3 | 9 | N/A | 12 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 3 | 5 | N/A | 8 | 3 | 9 | N/A | 12 |
| **Dormant Members** | | | | | | | | |
| General Service | 6 | 18 | 3 | 27 | 8 | 12 | 3 | 23 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 6 | 18 | 3 | 27 | 8 | 12 | 3 | 23 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 12 | 3 | 1 | 16 | 12 | 2 | 0 | 14 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 12 | 3 | 1 | 16 | 12 | 2 | 0 | 14 |
| **Grand Total Number of Members** | **36** | **64** | **44** | **144** | **38** | **65** | **52** | **155** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | 2 | | | | | | | 2 |
| 40-44 | 1 | 2 | 6 | | | | | | | 9 |
| 45-49 | | 3 | 4 | 2 | | | | | | 9 |
| 50-54 | | 2 | 6 | 1 | 1 | | | | | 10 |
| 55-59 | | 2 | 5 | | | 1 | | | | 8 |
| 60-64 | | 2 | 1 | 1 | 3 | | | | | 7 |
| 65-69 | | | 2 | | 1 | 2 | | | | 5 |
| 70-74 | | 1 | 1 | | | 1 | | | | 3 |
| 75+ | | | | | | | | | | |
| Total | 1 | 12 | 27 | 4 | 5 | 4 | | | | 53 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 1 | 539 |
| 35-39 | 4 | 232 |
| 40-44 | 1 | 204 |
| 45-49 | 3 | 625 |
| 50-54 | 3 | 241 |
| 55-59 | 5 | 145 |
| 60-64 | 5 | 310 |
| 65-69 | 1 | 180 |
| 70-74 | 1 | 110 |
| 75+ | | |
| Total | 24 | 285 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 2 | 741 |
| 60-64 | 5 | 504 |
| 65-69 | 4 | 633 |
| 70-74 | 3 | 366 |
| 75-79 | 1 | 22 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 15 | 510 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Deschutes Valley Water District/2527
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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September 28, 2012
Deschutes Valley Water District/2527

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Deschutes Valley Water District -- #2527

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Deschutes Valley Water District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Deschutes Valley Water District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Deschutes Valley Water District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 6.22% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 11.47% | 11.47% | 11.47% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.84%** | **17.89%** | **20.62%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **18.43%** | **18.38%** | **21.11%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 75%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.69% | 17.69% |
| Minimum July 1, 2015 Rate | 14.15% | 10.61% |
| Maximum July 1, 2015 Rate | 21.23% | 24.77% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 20 |
| Amortization factor | 12.504 | 13.360 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.24% | 10.15% | 10.15% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.69% | 11.47% | 11.47% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $6,682,934 | $7,756,894 | $1,073,960 | 86% | $1,375,779 | 78% |
| 12/31/2007 | 7,180,320 | 8,057,506 | 877,186 | 89% | 1,611,789 | 54% |
| 12/31/2008 | 5,798,667 | 8,368,502 | 2,569,835 | 69% | 1,761,304 | 146% |
| 12/31/2009 | 6,744,874 | 9,050,801 | 2,305,927 | 75% | 1,719,655 | 134% |
| 12/31/2010 | 7,454,286 | 9,509,643 | 2,055,357 | 78% | 1,701,768 | 121% |
| 12/31/2011 | 7,556,537 | 10,044,617 | 2,488,080 | 75% | 1,753,293 | 142% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Deschutes Valley Water District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $2,488,080 | $2,055,357 |
| Allocated pooled OPSRP UAL | 29,915 | 21,130 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,517,995 | 2,076,487 |
| Combined valuation payroll | 1,753,293 | 1,701,768 |
| Net pension UAL as a percentage of payroll | 144% | 122% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $45,420 | $61,227 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $85,437 | $84,249 |
| Tier 1/Tier 2 valuation payroll | 1,373,790 | 1,401,981 |
| Tier 1/Tier 2 pension normal cost rate | 6.22% | 6.01% |
| Tier 1/ Tier 2 Actuarial accrued liability | $10,044,617 | $9,509,643 |
| Actuarial asset value | 7,556,537 | 7,454,286 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 2,488,080 | 2,055,357 |
| Tier 1/ Tier 2 Funded status | 75% | 78% |
| Combined valuation payroll | $1,753,293 | $1,701,768 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 142% | 121% |
| Tier 1/Tier 2 UAL rate | 11.47% | 9.53% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 18 | 19 |
| Tier 1/Tier 2 dormant members | 3 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 10 | 9 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,753,293 | 1,701,768 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $2,199,554 | $2,343,328 |
| 2. Employer reserves | 3,265,794 | 3,234,385 |
| 3. Benefits in force reserve | 2,091,189 | 1,876,572 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$7,556,537** | **$7,454,286** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $7,454,286 |
| 2. | Regular employer contributions | 248,181 |
| 3. | Benefit payments and expenses | (350,364) |
| 4. | Adjustments [2] | (49,596) |
| 5. | Interest credited | 254,032 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$7,556,537** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 46,486 | 48,210 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 38,951 | 36,039 |
| **Total** | **$85,437** | **$84,249** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $85,437 | $85,437 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 5,153,102 | 5,418,163 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 469,797 | 399,091 |
| ▪ **Total Active Members** | **$5,622,899** | **$5,817,254** |
| Dormant Members | 618,396 | 602,515 |
| Retired Members and Beneficiaries | 3,803,322 | 3,089,874 |
| **Total Actuarial Accrued Liability** | **$10,044,617** | **$9,509,643** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $10,044,617 | $10,044,617 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $10,044,617 | $9,509,643 |
| 2. Actuarial value of assets | 7,556,537 | 7,454,286 |
| 3. Unfunded accrued liability *(1. – 2.)* | 2,488,080 | 2,055,357 |
| 4. Funded percentage *(2. ÷ 1.)* | 75% | 78% |
| 5. Combined valuation payroll | $1,753,293 | $1,701,768 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 142% | 121% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $405,027 | $33,379 | $30,981 | $402,629 | $34,631 |
| December 31, 2009 | $1,905,556 | $145,564 | $146,248 | $1,906,240 | $151,023 |
| December 31, 2011 | N/A | N/A | N/A | $179,211 | $13,235 |
| **Total** | | | | **$2,488,080** | **$198,889** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $9,509,643 |
| b. Normal cost at December 31, 2010 | 84,249 |
| c. Benefit payments during 2011 | (348,068) |
| d. Interest at 8.0% to December 31, 2011 | 753,589 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 9,999,413 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 9,999,413 |
| 2. Actuarial accrued liability at December 31, 2011 | 10,044,617 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (45,204) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 7,454,286 |
| b. Contributions for 2011[1] | 248,181 |
| c. Benefit payments and expenses during 2011 | (350,364) |
| d. Interest at 8.0% to December 31, 2011 | 592,255 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 7,944,357 |
| 5. Actuarial value of assets at December 31, 2011 | 7,556,537 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (387,820) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($433,024)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,055,357** |
| 2. Expected increase | (301) |
| 3. Liability (gain)/loss | 45,204 |
| 4. Asset (gain)/loss | 387,820 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$2,488,080** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | **December 31, 2011** | | | **December 31, 2010** | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 46,486 | 958,526 | 4.85% | 48,210 | 1,008,714 | 4.78% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 38,951 | 415,264 | 9.38% | 36,039 | 393,267 | 9.16% |
| **Total** | **$85,437** | **$1,373,790** | **6.22%** | **$84,249** | **$1,401,981** | **6.01%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $2,488,080 | $2,055,357 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 198,889 | 160,095 |
| 3. Combined valuation payroll | 1,753,293 | 1,701,768 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 11.34% | 9.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.22% | 6.01% |
| b. Tier 1/Tier 2 UAL rate | 11.34% | 9.41% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.69% | 15.54% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 15.24% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.24% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.05% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.05% |
| c. Funded percentage | 75% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.58% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.66% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.82% |
| 7. July 1, 2013 total pension rate, before adjustment | 17.69% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 11.34% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 11.34% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.69% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 6.22% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 6.22% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.69% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.22% | 6.01% |
| b. Tier 1/Tier 2 UAL rate | 11.34% | 9.41% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 17.69% | 15.54% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $958,526 | $0 | $958,526 |
| Tier 2 | 415,264 | 0 | 415,264 |
| Tier 1/Tier 2 valuation payroll | 1,373,790 | 0 | 1,373,790 |
| OPSRP valuation payroll | 379,503 | 0 | 379,503 |
| **Combined valuation payroll** | **$1,753,293** | **$0** | **$1,753,293** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 12 | 6 | 6 | 24 | 13 | 6 | 5 | 24 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 12 | 6 | 6 | 24 | 13 | 6 | 5 | 24 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 10 | 0 | 0 | 10 | 9 | 0 | 0 | 9 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 10 | 0 | 0 | 10 | 9 | 0 | 0 | 9 |
| **Grand Total Number of Members** | **24** | **7** | **6** | **37** | **24** | **7** | **5** | **36** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 1 | 1 | 1 | | | | | | **3** |
| **40-44** | | | 1 | 3 | | | | | | **4** |
| **45-49** | | 2 | | | | 1 | | | | **3** |
| **50-54** | | | | | | 2 | | | | **2** |
| **55-59** | | | 1 | | | 3 | 1 | | | **5** |
| **60-64** | | | | | | | 1 | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **3** | **3** | **4** | | **6** | **2** | | | **18** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | 1 | 54 |
| **55-59** | 2 | 2,448 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 3 | 1,650 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 5 | 2,021 |
| **65-69** | 2 | 3,327 |
| **70-74** | 2 | 2,505 |
| **75-79** | 1 | 2,454 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 10 | 2,422 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Douglas County Fire District #2/2729
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Douglas County Fire District #2/2729

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Douglas County Fire District #2 -- #2729

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Douglas County Fire District #2 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Douglas County Fire District #2.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Douglas County Fire District #2*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 16.33% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 6.48% | 6.48% | 6.48% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **22.96%** | **12.90%** | **15.63%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **23.55%** | **13.39%** | **16.12%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 63%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 22.81% | 22.81% |
| Minimum July 1, 2015 Rate | 18.25% | 13.69% |
| Maximum July 1, 2015 Rate | 27.37% | 31.93% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 23.19% | 6.21% | 6.21% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 27.74% | 11.41% | 11.41% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $22,683,874 | $22,824,606 | $140,732 | 99% | $3,252,704 | 4% |
| 12/31/2007 | 24,464,191 | 22,957,040 | (1,507,151) | 107% | 3,552,653 | (42%) |
| 12/31/2008 | 18,740,759 | 24,471,290 | 5,730,531 | 77% | 5,030,988 | 114% |
| 12/31/2009 | 21,244,955 | 27,112,422 | 5,867,467 | 78% | 5,578,286 | 105% |
| 12/31/2010 | 21,669,482 | 30,397,731 | 8,728,249 | 71% | 5,660,706 | 154% |
| 12/31/2011 | 19,613,988 | 31,008,691 | 11,394,703 | 63% | 5,860,669 | 194% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Douglas County Fire District #2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $11,394,703 | $8,728,249 |
| Allocated pooled OPSRP UAL | 99,997 | 70,285 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 11,494,700 | 8,798,534 |
| Combined valuation payroll | 5,860,669 | 5,660,706 |
| Net pension UAL as a percentage of payroll | 196% | 155% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $151,824 | $203,663 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $457,460 | $463,266 |
| Tier 1/Tier 2 valuation payroll | 2,802,034 | 2,905,741 |
| Tier 1/Tier 2 pension normal cost rate | 16.33% | 15.94% |
| Tier 1/ Tier 2 Actuarial accrued liability | $31,008,691 | $30,397,731 |
| Actuarial asset value | 19,613,988 | 21,669,482 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 11,394,703 | 8,728,249 |
| Tier 1/ Tier 2 Funded status | 63% | 71% |
| Combined valuation payroll | $5,860,669 | $5,660,706 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 194% | 154% |
| Tier 1/Tier 2 UAL rate | 6.48% | 6.54% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members[1] | 32 | 33 |
| Tier 1/Tier 2 dormant members | 7 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 37 | 35 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 5,860,669 | 5,660,706 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,997,972 | $2,465,348 |
| 2. Employer reserves | 5,395,098 | 6,904,089 |
| 3. Benefits in force reserve | 12,220,918 | 12,300,045 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$19,613,988** | **$21,669,482** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $21,669,482 |
| 2. Regular employer contributions | 357,866 |
| 3. Benefit payments and expenses | (2,047,530) |
| 4. Adjustments[2] | (887,410) |
| 5. Interest credited | 521,581 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$19,613,988** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $287,496 | $297,727 |
| Tier 1 General Service | 8,111 | 9,046 |
| Tier 2 Police & Fire | 152,740 | 141,347 |
| Tier 2 General Service | 9,113 | 15,146 |
| **Total** | **$457,460** | **$463,266** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $457,460 | $457,460 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $6,639,540 | $6,755,487 |
| ▪ Tier 1 General Service | 197,801 | 185,607 |
| ▪ Tier 2 Police & Fire | 1,406,170 | 1,231,175 |
| ▪ Tier 2 General Service | 42,207 | 156,491 |
| ▪ **Total Active Members** | **$8,285,718** | **$8,328,760** |
| Dormant Members | 496,349 | 1,816,304 |
| Retired Members and Beneficiaries | 22,226,624 | 20,252,667 |
| **Total Actuarial Accrued Liability** | **$31,008,691** | **$30,397,731** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $31,008,691 | $31,008,691 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $31,008,691 | $30,397,731 |
| 2. Actuarial value of assets | 19,613,988 | 21,669,482 |
| 3. Unfunded accrued liability *(1. – 2.)* | 11,394,703 | 8,728,249 |
| 4. Funded percentage *(2. ÷ 1.)* | 63% | 71% |
| 5. Combined valuation payroll | $5,860,669 | $5,660,706 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 194% | 154% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,360,069) | ($112,085) | ($104,034) | ($1,352,018) | ($116,288) |
| December 31, 2009 | $7,252,820 | $554,040 | $556,641 | $7,255,421 | $574,817 |
| December 31, 2011 | N/A | N/A | N/A | $5,491,300 | $405,531 |
| **Total** | | | | **$11,394,703** | **$864,060** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $30,397,731 |
| b. Normal cost at December 31, 2010 | 463,266 |
| c. Benefit payments during 2011 | (2,034,110) |
| d. Interest at 8.0% to December 31, 2011 | 2,387,515 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 31,214,402 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 31,214,402 |
| 2. Actuarial accrued liability at December 31, 2011 | 31,008,691 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 205,711 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 21,669,482 |
| b. Contributions for 2011[1] | 357,866 |
| c. Benefit payments and expenses during 2011 | (2,047,530) |
| d. Interest at 8.0% to December 31, 2011 | 1,665,972 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 21,645,789 |
| 5. Actuarial value of assets at December 31, 2011 | 19,613,988 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (2,031,801) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($1,826,090)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$8,728,249** |
| 2. Expected increase | 840,364 |
| 3. Liability (gain)/loss | (205,711) |
| 4. Asset (gain)/loss | 2,031,801 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$11,394,703** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $287,496 | $1,603,099 | 17.93% | $297,727 | $1,715,356 | 17.36% |
| Tier 1 General Service | 8,111 | 70,811 | 11.45% | 9,046 | 71,981 | 12.57% |
| Tier 2 Police & Fire | 152,740 | 1,034,503 | 14.76% | 141,347 | 993,423 | 14.23% |
| Tier 2 General Service | 9,113 | 93,621 | 9.73% | 15,146 | 124,981 | 12.12% |
| **Total** | **$457,460** | **$2,802,034** | **16.33%** | **$463,266** | **$2,905,741** | **15.94%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $11,394,703 | $8,728,249 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 864,060 | 651,356 |
| 3. Combined valuation payroll | 5,860,669 | 5,660,706 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 14.74% | 11.51% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.33% | 15.94% |
| b. Tier 1/Tier 2 UAL rate | 14.74% | 11.51% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 31.20% | 27.57% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 16.29% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 16.29% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 3.26% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.26% |
| | c. Funded percentage | 63% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.52% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 9.77% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 22.81% |
| 7. | July 1, 2013 total pension rate, before adjustment | 31.20% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (8.39%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 14.74% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 6.35% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 22.81% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 16.33% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 16.33% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 22.81% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.33% | 15.94% |
| b. Tier 1/Tier 2 UAL rate | 6.35% | 6.42% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 22.81% | 22.48% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $70,811 | $1,603,099 | $1,673,910 |
| Tier 2 | 93,621 | 1,034,503 | 1,128,124 |
| Tier 1/Tier 2 valuation payroll | 164,432 | 2,637,602 | 2,802,034 |
| OPSRP valuation payroll | 1,804,084 | 1,254,551 | 3,058,635 |
| **Combined valuation payroll** | **$1,968,516** | **$3,892,153** | **$5,860,669** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 2 | 41 | 44 | 1 | 2 | 33 | 36 |
| Police & Fire | 17 | 12 | 15 | 44 | 18 | 12 | 15 | 45 |
| Total | 18 | 14 | 56 | 88 | 19 | 14 | 48 | 81 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 2 | N/A | 3 | 1 | 4 | N/A | 5 |
| Police & Fire | 1 | 1 | N/A | 2 | 1 | 3 | N/A | 4 |
| Total | 2 | 3 | N/A | 5 | 2 | 7 | N/A | 9 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 2 | 1 | 3 | 0 | 1 | 2 | 3 |
| Police & Fire | 2 | 3 | 0 | 5 | 4 | 1 | 0 | 5 |
| Total | 2 | 5 | 1 | 8 | 4 | 2 | 2 | 8 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 35 | 1 | 0 | 36 | 33 | 1 | 0 | 34 |
| Total | 36 | 1 | 0 | 37 | 34 | 1 | 0 | 35 |
| **Grand Total Number of Members** | **58** | **23** | **57** | **138** | **59** | **24** | **50** | **133** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 1 | 2 | | | | | | | 3 |
| 35-39 | | | 4 | | | | | | | 4 |
| 40-44 | | | 2 | 2 | 2 | | | | | 6 |
| 45-49 | | | 3 | 5 | 1 | 3 | | | | 12 |
| 50-54 | | 1 | | 3 | 1 | | | | | 5 |
| 55-59 | | | | 1 | 1 | | | | | 2 |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **2** | **11** | **11** | **5** | **3** | | | | **32** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 2 | 541 |
| 35-39 | 1 | 441 |
| 40-44 | 1 | 209 |
| 45-49 | 1 | 3,070 |
| 50-54 | | |
| 55-59 | 1 | 1,266 |
| 60-64 | | |
| 65-69 | 1 | 69 |
| 70-74 | | |
| 75+ | | |
| **Total** | 7 | 877 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | 7 | 3,635 |
| 55-59 | 9 | 5,742 |
| 60-64 | 7 | 3,942 |
| 65-69 | 6 | 2,494 |
| 70-74 | 5 | 1,993 |
| 75-79 | 3 | 2,212 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 37 | 3,683 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Douglas County/2003
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Douglas County/2003

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Douglas County/2003

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS
### Douglas County -- #2003

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Douglas County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Douglas County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Douglas County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.57% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 17.45% | 17.45% | 17.45% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **26.17%** | **23.87%** | **26.60%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **26.76%** | **24.36%** | **27.09%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 74%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 26.02% | 26.02% |
| Minimum July 1, 2015 Rate | 20.82% | 15.62% |
| Maximum July 1, 2015 Rate | 31.22% | 36.42% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 25 | 30 |
| Amortization factor | 15.497 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 21.04% | 13.21% | 13.21% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 26.02% | 17.45% | 17.45% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $252,759,366 | $270,455,747 | $17,696,382 | 93% | $33,360,845 | 53% |
| 12/31/2007 | 265,911,022 | 277,239,311 | 11,328,289 | 96% | 32,299,241 | 35% |
| 12/31/2008 | 201,654,842 | 285,001,578 | 83,346,736 | 71% | 31,295,331 | 266% |
| 12/31/2009 | 226,064,086 | 295,167,317 | 69,103,231 | 77% | 30,664,936 | 225% |
| 12/31/2010 | 237,499,259 | 305,065,495 | 67,566,236 | 78% | 31,655,167 | 213% |
| 12/31/2011 | 228,167,624 | 308,521,151 | 80,353,527 | 74% | 29,880,985 | 269% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Douglas County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $80,353,527 | $67,566,236 |
| Allocated pooled OPSRP UAL | 509,841 | 393,038 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 80,863,368 | 67,959,274 |
| Combined valuation payroll | 29,880,985 | 31,655,167 |
| Net pension UAL as a percentage of payroll | 271% | 215% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $774,082 | $1,138,903 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $1,608,019 | $1,653,801 |
| Tier 1/Tier 2 valuation payroll | 18,765,195 | 21,060,860 |
| Tier 1/Tier 2 pension normal cost rate | 8.57% | 7.85% |
| Tier 1/ Tier 2 Actuarial accrued liability | $308,521,151 | $305,065,495 |
| Actuarial asset value | 228,167,624 | 237,499,259 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 80,353,527 | 67,566,236 |
| Tier 1/ Tier 2 Funded status | 74% | 78% |
| Combined valuation payroll | $29,880,985 | $31,655,167 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 269% | 213% |
| Tier 1/Tier 2 UAL rate | 17.45% | 16.50% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 395 | 460 |
| Tier 1/Tier 2 dormant members | 263 | 255 |
| Tier 1/Tier 2 retirees and beneficiaries | 1,013 | 975 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 29,880,985 | 31,655,167 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $39,171,126 | $44,308,795 |
| 2. Employer reserves | 81,063,576 | 83,178,355 |
| 3. Benefits in force reserve | 107,932,922 | 110,012,109 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$228,167,624** | **$237,499,259** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $237,499,259 |
| 2. | Regular employer contributions | 4,607,683 |
| 3. | Benefit payments and expenses | (18,083,416) |
| 4. | Adjustments[2] | (2,895,991) |
| 5. | Interest credited | 7,040,089 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$228,167,624** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $404,223 | $399,966 |
| Tier 1 General Service | 250,606 | 250,171 |
| Tier 2 Police & Fire | 323,140 | 336,090 |
| Tier 2 General Service | 630,050 | 667,574 |
| **Total** | **$1,608,019** | **$1,653,801** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $1,608,019 | $1,608,019 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $13,250,875 | $14,393,940 |
| ▪ Tier 1 General Service | 61,094,196 | 69,978,159 |
| ▪ Tier 2 Police & Fire | 4,444,643 | 4,174,814 |
| ▪ Tier 2 General Service | 9,410,422 | 8,958,171 |
| ▪ **Total Active Members** | **$88,200,136** | **$97,505,084** |
| Dormant Members | 24,019,511 | 26,419,714 |
| Retired Members and Beneficiaries | 196,301,504 | 181,140,697 |
| **Total Actuarial Accrued Liability** | **$308,521,151** | **$305,065,495** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $308,521,151 | $308,521,151 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $308,521,151 | $305,065,495 |
| 2. Actuarial value of assets | 228,167,624 | 237,499,259 |
| 3. Unfunded accrued liability *(1. – 2.)* | 80,353,527 | 67,566,236 |
| 4. Funded percentage *(2. ÷ 1.)* | 74% | 78% |
| 5. Combined valuation payroll | $29,880,985 | $31,655,167 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 269% | 213% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $3,098,428 | $255,344 | $237,005 | $3,080,089 | $264,919 |
| December 31, 2009 | $66,195,153 | $5,056,614 | $5,080,361 | $66,218,900 | $5,246,237 |
| December 31, 2011 | N/A | N/A | N/A | $11,054,538 | $816,375 |
| **Total** | | | | **$80,353,527** | **$6,327,531** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $305,065,495 |
| b. Normal cost at December 31, 2010 | 1,653,801 |
| c. Benefit payments during 2011 | (17,964,887) |
| d. Interest at 8.0% to December 31, 2011 | 23,818,948 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 312,573,357 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 312,573,357 |
| 2. Actuarial accrued liability at December 31, 2011 | 308,521,151 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 4,052,206 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 237,499,259 |
| b. Contributions for 2011[1] | 4,607,683 |
| c. Benefit payments and expenses during 2011 | (18,083,416) |
| d. Interest at 8.0% to December 31, 2011 | 18,460,911 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 242,484,437 |
| 5. Actuarial value of assets at December 31, 2011 | 228,167,624 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (14,316,813) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($10,264,607)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$67,566,236** |
| 2. Expected increase | 2,522,684 |
| 3. Liability (gain)/loss | (4,052,206) |
| 4. Asset (gain)/loss | 14,316,813 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$80,353,527** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $404,223 | $2,610,813 | 15.48% | $399,966 | $2,810,339 | 14.23% |
| Tier 1 General Service | 250,606 | 8,343,185 | 3.00% | 250,171 | 9,769,429 | 2.56% |
| Tier 2 Police & Fire | 323,140 | 2,038,542 | 15.85% | 336,090 | 2,183,292 | 15.39% |
| Tier 2 General Service | 630,050 | 5,772,655 | 10.91% | 667,574 | 6,297,800 | 10.60% |
| **Total** | **$1,608,019** | **$18,765,195** | **8.57%** | **$1,653,801** | **$21,060,860** | **7.85%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $80,353,527 | $67,566,236 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 6,327,531 | 5,184,394 |
| 3. Combined valuation payroll | 29,880,985 | 31,655,167 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 21.18% | 16.38% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.57% | 7.85% |
| b. Tier 1/Tier 2 UAL rate | 21.18% | 16.38% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 29.88% | 24.35% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 19.72% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 19.72% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 3.94% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.94% |
| | c. Funded percentage | 74% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.30% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 13.42% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 26.02% |
| 7. | July 1, 2013 total pension rate, before adjustment | 29.88% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.86%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 21.18% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 17.32% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 26.02% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.57% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.57% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 26.02% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.57% | 7.85% |
| b. Tier 1/Tier 2 UAL rate | 17.32% | 16.38% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 26.02% | 24.35% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $8,343,185 | $2,610,813 | $10,953,998 |
| Tier 2 | 5,772,655 | 2,038,542 | 7,811,197 |
| Tier 1/Tier 2 valuation payroll | 14,115,840 | 4,649,355 | 18,765,195 |
| OPSRP valuation payroll | 9,182,721 | 1,933,069 | 11,115,790 |
| **Combined valuation payroll** | **$23,298,561** | **$6,582,424** | **$29,880,985** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 180 | 145 | 287 | 612 | 219 | 164 | 341 | 724 |
| Police & Fire | 39 | 31 | 45 | 115 | 43 | 34 | 36 | 113 |
| Total | 219 | 176 | 332 | 727 | 262 | 198 | 377 | 837 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 126 | 88 | N/A | 214 | 163 | 105 | N/A | 268 |
| Police & Fire | 15 | 21 | N/A | 36 | 20 | 23 | N/A | 43 |
| Total | 141 | 109 | N/A | 250 | 183 | 128 | N/A | 311 |
| **Dormant Members** | | | | | | | | |
| General Service | 137 | 105 | 24 | 266 | 133 | 102 | 14 | 249 |
| Police & Fire | 14 | 7 | 2 | 23 | 12 | 8 | 1 | 21 |
| Total | 151 | 112 | 26 | 289 | 145 | 110 | 15 | 270 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 821 | 44 | 3 | 868 | 808 | 22 | 4 | 834 |
| Police & Fire | 138 | 10 | 0 | 148 | 141 | 4 | 0 | 145 |
| Total | 959 | 54 | 3 | 1,016 | 949 | 26 | 4 | 979 |
| **Grand Total Number of Members** | **1,470** | **451** | **361** | **2,282** | **1,539** | **462** | **396** | **2,397** |

1 *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | 1 | | | | | | | **1** |
| **30-34** | | 4 | 3 | | | | | | | **7** |
| **35-39** | | 14 | 12 | 2 | | | | | | **28** |
| **40-44** | | 9 | 17 | 15 | 6 | | | | | **47** |
| **45-49** | | 14 | 12 | 9 | 15 | 4 | | | | **54** |
| **50-54** | 1 | 6 | 17 | 10 | 24 | 7 | 2 | 1 | | **68** |
| **55-59** | | 11 | 22 | 26 | 27 | 13 | 10 | 3 | | **112** |
| **60-64** | 1 | 11 | 12 | 12 | 17 | 5 | 1 | 1 | 1 | **61** |
| **65-69** | 1 | 4 | 4 | 3 | | 2 | 1 | | | **15** |
| **70-74** | | 1 | | 1 | | | | | | **2** |
| **75+** | | | | | | | | | | |
| **Total** | **3** | **74** | **100** | **78** | **89** | **31** | **14** | **5** | **1** | **395** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 5 | 265 |
| **35-39** | 19 | 512 |
| **40-44** | 16 | 1,419 |
| **45-49** | 28 | 1,388 |
| **50-54** | 47 | 735 |
| **55-59** | 76 | 1,013 |
| **60-64** | 35 | 1,229 |
| **65-69** | 21 | 460 |
| **70-74** | 5 | 185 |
| **75+** | 11 | 247 |
| **Total** | 263 | 914 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 3 | 878 |
| **45-49** | 3 | 1,172 |
| **50-54** | 16 | 1,747 |
| **55-59** | 85 | 2,132 |
| **60-64** | 194 | 1,772 |
| **65-69** | 216 | 1,354 |
| **70-74** | 164 | 1,427 |
| **75-79** | 141 | 1,337 |
| **80-84** | 88 | 847 |
| **85-89** | 62 | 597 |
| **90-94** | 31 | 644 |
| **95-99** | 9 | 296 |
| **100+** | 1 | 710 |
| **Total** | 1,013 | 1,391 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Douglas Soil & Water Conservation District/2743
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Douglas Soil & Water Conservation District/2743

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Douglas Soil & Water Conservation District -- #2743

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Douglas Soil & Water Conservation District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Douglas Soil & Water Conservation District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Douglas Soil & Water Conservation District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 5.81% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 1.72% | 1.72% | 1.72% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **7.68%** | **8.14%** | **10.87%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **8.27%** | **8.63%** | **11.36%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 114%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 7.53% | 7.53% |
| Minimum July 1, 2015 Rate | 4.53% | 1.53% |
| Maximum July 1, 2015 Rate | 10.53% | 13.53% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 1 |
| Amortization factor | 17.175 | 0.572 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.53% | 6.56% | 6.56% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 4.42% | (1.39%) | (1.39%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $332,507 | $300,711 | ($31,796) | 111% | $181,414 | (18%) |
| 12/31/2007 | 364,906 | 313,752 | (51,154) | 116% | 180,479 | (28%) |
| 12/31/2008 | 308,455 | 313,693 | 5,238 | 98% | 131,422 | 4% |
| 12/31/2009 | 386,599 | 391,303 | 4,704 | 99% | 210,437 | 2% |
| 12/31/2010 | 453,715 | 393,860 | (59,855) | 115% | 189,449 | (32%) |
| 12/31/2011 | 486,244 | 424,745 | (61,499) | 114% | 242,761 | (25%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Douglas Soil & Water Conservation District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($61,499) | ($59,855) |
| Allocated pooled OPSRP UAL | 4,142 | 2,352 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (57,357) | (57,503) |
| Combined valuation payroll | 242,761 | 189,449 |
| Net pension UAL as a percentage of payroll | (24%) | (30%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $6,289 | $6,816 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5,855 | $5,401 |
| Tier 1/Tier 2 valuation payroll | 100,739 | 94,463 |
| Tier 1/Tier 2 pension normal cost rate | 5.81% | 5.72% |
| Tier 1/ Tier 2 Actuarial accrued liability | $424,745 | $393,860 |
| Actuarial asset value | 486,244 | 453,715 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (61,499) | (59,855) |
| Tier 1/ Tier 2 Funded status | 114% | 115% |
| Combined valuation payroll | $242,761 | $189,449 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (25%) | (32%) |
| Tier 1/Tier 2 UAL rate | 1.72% | 1.81% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 3 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 242,761 | 189,449 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $145,322 | $140,542 |
| 2. Employer reserves | 340,922 | 313,173 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$486,244** | **$453,715** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $453,715 |
| 2. | Regular employer contributions | 20,427 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | (1,119) |
| 5. | Interest credited | 13,220 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$486,244** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 5,855 | 5,401 |
| **Total** | **$5,855** | **$5,401** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $5,855 | $5,855 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 296,563 | 279,390 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 66,858 | 53,625 |
| ▪ **Total Active Members** | **$363,421** | **$333,015** |
| Dormant Members | 61,324 | 60,845 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$424,745** | **$393,860** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $424,745 | $424,745 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $424,745 | $393,860 |
| 2. Actuarial value of assets | 486,244 | 453,715 |
| 3. Unfunded accrued liability *(1. – 2.)* | (61,499) | (59,855) |
| 4. Funded percentage *(2. ÷ 1.)* | 114% | 115% |
| 5. Combined valuation payroll | $242,761 | $189,449 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (25%) | (32%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($127,398) | ($10,499) | ($9,745) | ($126,644) | ($10,893) |
| December 31, 2009 | $132,832 | $10,147 | $10,195 | $132,880 | $10,528 |
| December 31, 2011 | N/A | N/A | N/A | ($67,735) | ($5,002) |
| **Total** | | | | **($61,499)** | **($5,367)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $393,860 |
| b. Normal cost at December 31, 2010 | 5,401 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 31,941 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 431,202 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 431,202 |
| 2. Actuarial accrued liability at December 31, 2011 | 424,745 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 6,457 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 453,715 |
| b. Contributions for 2011[1] | 20,427 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 37,114 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 511,257 |
| 5. Actuarial value of assets at December 31, 2011 | 486,244 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (25,013) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($18,556)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($59,855)** |
| 2. Expected increase | (20,200) |
| 3. Liability (gain)/loss | (6,457) |
| 4. Asset (gain)/loss | 25,013 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **($61,499)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 52,785 | 0.00% | 0 | 52,810 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 5,855 | 47,954 | 12.21% | 5,401 | 41,653 | 12.97% |
| **Total** | **$5,855** | **$100,739** | **5.81%** | **$5,401** | **$94,463** | **5.72%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($61,499) | ($59,855) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (5,367) | (5,174) |
| 3. Combined valuation payroll | 242,761 | 189,449 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.21%) | (2.73%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.81% | 5.72% |
| b. Tier 1/Tier 2 UAL rate | (2.21%) | (2.73%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 3.73% | 3.11% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 10.53% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.53% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.11% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 114% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.53% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.53% |
| 7. | July 1, 2013 total pension rate, before adjustment | 3.73% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 3.80% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.21%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.59% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 7.53% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 5.81% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 5.81% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 7.53% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.81% | 5.72% |
| b. Tier 1/Tier 2 UAL rate | 1.59% | 1.69% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 7.53% | 7.53% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $52,785 | $0 | $52,785 |
| Tier 2 | 47,954 | 0 | 47,954 |
| Tier 1/Tier 2 valuation payroll | 100,739 | 0 | 100,739 |
| OPSRP valuation payroll | 142,022 | 0 | 142,022 |
| **Combined valuation payroll** | **$242,761** | **$0** | **$242,761** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 1 | 4 | 6 | 1 | 1 | 3 | 5 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 4 | 6 | 1 | 1 | 3 | 5 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 4 | 1 | N/A | 5 | 4 | 1 | N/A | 5 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 4 | 1 | N/A | 5 | 4 | 1 | N/A | 5 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 3 | 0 | 3 | 0 | 3 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 3 | 0 | 3 | 0 | 3 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **5** | **5** | **4** | **14** | **5** | **5** | **3** | **13** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | 1 | | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | 1 | | | | | | | | **1** |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **1** | | | **1** | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 2 | 669 |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | 1 | 481 |
| 70-74 | | |
| 75+ | | |
| Total | 3 | 606 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

East Fork Irrigation District/2529
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
East Fork Irrigation District/2529

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,


Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary


**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### East Fork Irrigation District -- #2529

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for East Fork Irrigation District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to East Fork Irrigation District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for East Fork Irrigation District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.72% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.52% | 2.52% | 2.52% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **10.39%** | **8.94%** | **11.67%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.98%** | **9.43%** | **12.16%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 94%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.24% | 10.24% |
| Minimum July 1, 2015 Rate | 7.24% | 4.24% |
| Maximum July 1, 2015 Rate | 13.24% | 16.24% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 26 | 30 |
| Amortization factor | 15.823 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.87% | 1.38% | 1.38% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.24% | 2.52% | 2.52% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,132,311 | $1,056,382 | ($75,928) | 107% | $215,803 | (35%) |
| 12/31/2007 | 1,240,386 | 1,088,284 | (152,102) | 114% | 220,159 | (69%) |
| 12/31/2008 | 1,025,313 | 1,170,231 | 144,918 | 88% | 230,228 | 63% |
| 12/31/2009 | 1,189,617 | 1,242,347 | 52,730 | 96% | 237,201 | 22% |
| 12/31/2010 | 1,316,959 | 1,352,279 | 35,320 | 97% | 243,351 | 15% |
| 12/31/2011 | 1,369,662 | 1,464,619 | 94,957 | 94% | 247,525 | 38% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *East Fork Irrigation District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $94,957 | $35,320 |
| Allocated pooled OPSRP UAL | 4,223 | 3,022 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 99,180 | 38,342 |
| Combined valuation payroll | 247,525 | 243,351 |
| Net pension UAL as a percentage of payroll | 40% | 16% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $6,412 | $8,755 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $19,098 | $17,773 |
| Tier 1/Tier 2 valuation payroll | 247,525 | 243,351 |
| Tier 1/Tier 2 pension normal cost rate | 7.72% | 7.30% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,464,619 | $1,352,279 |
| Actuarial asset value | 1,369,662 | 1,316,959 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 94,957 | 35,320 |
| Tier 1/ Tier 2 Funded status | 94% | 97% |
| Combined valuation payroll | $247,525 | $243,351 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 38% | 15% |
| Tier 1/Tier 2 UAL rate | 2.52% | 0.74% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 6 | 6 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 4 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 247,525 | 243,351 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $476,308 | $448,763 |
| 2. Employer reserves | 802,417 | 766,249 |
| 3. Benefits in force reserve | 90,937 | 101,946 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$1,369,662** | **$1,316,959** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,316,959 |
| 2. | Regular employer contributions | 18,745 |
| 3. | Benefit payments and expenses | (15,236) |
| 4. | Adjustments [2] | (3,163) |
| 5. | Interest credited | 52,356 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,369,662** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 2,219 | 1,796 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 16,879 | 15,977 |
| **Total** | **$19,098** | **$17,773** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $19,098 | $19,098 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 884,484 | 820,510 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 250,838 | 222,181 |
| ▪ **Total Active Members** | **$1,135,322** | **$1,042,691** |
| Dormant Members | 163,908 | 141,727 |
| Retired Members and Beneficiaries | 165,389 | 167,861 |
| **Total Actuarial Accrued Liability** | **$1,464,619** | **$1,352,279** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,464,619 | $1,464,619 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,464,619 | $1,352,279 |
| 2. Actuarial value of assets | 1,369,662 | 1,316,959 |
| 3. Unfunded accrued liability *(1. – 2.)* | 94,957 | 35,320 |
| 4. Funded percentage *(2. ÷ 1.)* | 94% | 97% |
| 5. Combined valuation payroll | $247,525 | $243,351 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 38% | 15% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($205,333) | ($16,921) | ($15,706) | ($204,118) | ($17,556) |
| December 31, 2009 | $259,375 | $19,813 | $19,907 | $259,469 | $20,556 |
| December 31, 2011 | N/A | N/A | N/A | $39,606 | $2,925 |
| **Total** | | | | **$94,957** | **$5,925** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,352,279 |
| b. Normal cost at December 31, 2010 | 17,773 |
| c. Benefit payments during 2011 | (15,136) |
| d. Interest at 8.0% to December 31, 2011 | 108,999 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,463,915 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,463,915 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,464,619 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (704) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,316,959 |
| b. Contributions for 2011[1] | 18,745 |
| c. Benefit payments and expenses during 2011 | (15,236) |
| d. Interest at 8.0% to December 31, 2011 | 105,497 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,425,965 |
| 5. Actuarial value of assets at December 31, 2011 | 1,369,662 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (56,304) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($57,008)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$35,320** |
| 2. Expected increase | 2,629 |
| 3. Liability (gain)/loss | 704 |
| 4. Asset (gain)/loss | 56,304 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$94,957** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 2,219 | 111,457 | 1.99% | 1,796 | 110,158 | 1.63% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 16,879 | 136,068 | 12.40% | 15,977 | 133,193 | 12.00% |
| **Total** | **$19,098** | **$247,525** | **7.72%** | **$17,773** | **$243,351** | **7.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $94,957 | $35,320 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 5,925 | 1,509 |
| 3. Combined valuation payroll | 247,525 | 243,351 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.39% | 0.62% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.72% | 7.30% |
| b. Tier 1/Tier 2 UAL rate | 2.39% | 0.62% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.24% | 8.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 7.79% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.79% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.56% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 94% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.79% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 10.79% |
| 7. | July 1, 2013 total pension rate, before adjustment | 10.24% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.39% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.39% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 10.24% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.72% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.72% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 10.24% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.72% | 7.30% |
| b. Tier 1/Tier 2 UAL rate | 2.39% | 0.62% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 10.24% | 8.04% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $111,457 | $0 | $111,457 |
| Tier 2 | 136,068 | 0 | 136,068 |
| Tier 1/Tier 2 valuation payroll | 247,525 | 0 | 247,525 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$247,525** | **$0** | **$247,525** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 4 | 0 | 6 | 2 | 4 | 0 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 4 | 0 | 6 | 2 | 4 | 0 | 6 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 3 | 0 | N/A | 3 | 4 | 0 | N/A | 4 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 3 | 0 | N/A | 3 | 4 | 0 | N/A | 4 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| **Grand Total Number of Members** | **10** | **4** | **0** | **14** | **11** | **4** | **0** | **15** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | 1 | | | | | | **1** |
| 50-54 | | | | | 1 | | | | | **1** |
| 55-59 | | | 2 | | | | 1 | | | **3** |
| 60-64 | | | | | | | | | | |
| 65-69 | | | 1 | | | | | | | **1** |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | **3** | **1** | **1** | | **1** | | | **6** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | 1 | 2,076 |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 2,076 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | 1 | 74 |
| 75-79 | 2 | 595 |
| 80-84 | 1 | 609 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 4 | 468 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Estacada Cemetery District/2618
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Estacada Cemetery District/2618

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Estacada Cemetery District/2618

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Estacada Cemetery District -- #2618

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Estacada Cemetery District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Estacada Cemetery District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Estacada Cemetery District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.66% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (5.25%) | (5.25%) | (5.25%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **1.17%** | **3.90%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **1.66%** | **4.39%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 390%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (17.80%) | (19.75%) | (19.75%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (13.51%) | (18.76%) | (18.76%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $212,355 | $46,166 | ($166,189) | 460% | $17,834 | (932%) |
| 12/31/2007 | 232,115 | 45,842 | (186,273) | 506% | 42,129 | (442%) |
| 12/31/2008 | 171,253 | 55,968 | (115,285) | 306% | 42,940 | (268%) |
| 12/31/2009 | 205,540 | 51,404 | (154,136) | 400% | 45,227 | (341%) |
| 12/31/2010 | 229,923 | 58,666 | (171,257) | 392% | 48,044 | (356%) |
| 12/31/2011 | 235,178 | 60,314 | (174,864) | 390% | 54,019 | (324%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Estacada Cemetery District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($174,864) | ($171,257) |
| Allocated pooled OPSRP UAL | 922 | 597 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (173,942) | (170,660) |
| Combined valuation payroll | 54,019 | 48,044 |
| Net pension UAL as a percentage of payroll | (322%) | (355%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,399 | $1,729 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $444 | $105 |
| Tier 1/Tier 2 valuation payroll | 8,461 | 7,812 |
| Tier 1/Tier 2 pension normal cost rate | 10.66% | 6.68% |
| Tier 1/ Tier 2 Actuarial accrued liability | $60,314 | $58,666 |
| Actuarial asset value | 235,178 | 229,923 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (174,864) | (171,257) |
| Tier 1/ Tier 2 Funded status | 390% | 392% |
| Combined valuation payroll | $54,019 | $48,044 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (324%) | (356%) |
| Tier 1/Tier 2 UAL rate | (5.25%) | (1.34%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 54,019 | 48,044 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $23,128 | $22,470 |
| 2. Employer reserves | 212,050 | 207,453 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$235,178** | **$229,923** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $229,923 |
| 2. Regular employer contributions | (13) |
| 3. Benefit payments and expenses | 0 |
| 4. Adjustments[2] | 206 |
| 5. Interest credited | 5,063 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$235,178** |

1 *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

2 *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 444 | 105 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$444** | **$105** |

### ***Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes***

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $444 | $444 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 15,966 | 14,907 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$15,966** | **$14,907** |
| Dormant Members | 44,348 | 43,759 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$60,314** | **$58,666** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $60,314 | $60,314 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $60,314 | $58,666 |
| 2. Actuarial value of assets | 235,178 | 229,923 |
| 3. Unfunded accrued liability *(1. – 2.)* | (174,864) | (171,257) |
| 4. Funded percentage *(2. ÷ 1.)* | 390% | 392% |
| 5. Combined valuation payroll | $54,019 | $48,044 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (324%) | (356%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($186,784) | ($15,393) | ($14,287) | ($185,678) | ($15,970) |
| December 31, 2009 | $33,235 | $2,539 | $2,551 | $33,247 | $2,634 |
| December 31, 2011 | N/A | N/A | N/A | ($22,433) | ($1,657) |
| **Total** | | | | **($174,864)** | **($14,993)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $58,666 |
| b. Normal cost at December 31, 2010 | 105 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 4,702 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 63,473 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 63,473 |
| 2. Actuarial accrued liability at December 31, 2011 | 60,314 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 3,159 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 229,923 |
| b. Contributions for 2011[1] | (13) |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 18,393 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 248,303 |
| 5. Actuarial value of assets at December 31, 2011 | 235,178 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (13,125) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($9,966)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($171,257)** |
| 2. Expected increase | (13,573) |
| 3. Liability (gain)/loss | (3,159) |
| 4. Asset (gain)/loss | 13,125 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($174,864)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 444 | 8,461 | 5.25% | 105 | 7,812 | 1.34% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$444** | **$8,461** | **5.25%** | **$105** | **$7,812** | **1.34%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($174,864) | ($171,257) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (14,993) | (14,162) |
| 3. Combined valuation payroll | 54,019 | 48,044 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (27.76%) | (29.48%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.25% | 1.34% |
| b. Tier 1/Tier 2 UAL rate | (27.76%) | (29.48%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | (22.38%) | (28.02%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 390% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 0.00% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | (22.38%) |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 22.38% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (27.76%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (5.38%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 0.00% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 5.41% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 5.25% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.66% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.66% | 6.68% |
| b. Tier 1/Tier 2 UAL rate | (5.38%) | (1.46%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $8,461 | $0 | $8,461 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 8,461 | 0 | 8,461 |
| OPSRP valuation payroll | 45,558 | 0 | 45,558 |
| **Combined valuation payroll** | **$54,019** | **$0** | **$54,019** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **1** | **1** | **1** | **3** | **1** | **1** | **1** | **3** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 1 | 464 |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 1 | 464 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Eugene Water & Electric Board/2132
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Eugene Water & Electric Board/2132

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Eugene Water & Electric Board -- #2132

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Eugene Water & Electric Board to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Eugene Water & Electric Board.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Eugene Water & Electric Board*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.99% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 18.93% | 18.93% | 18.93% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | (1.01%) | (1.01%) | (1.01%) |
| **Net pension contribution rate** | **26.06%** | **24.34%** | **27.07%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **26.65%** | **24.83%** | **27.56%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 68%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 26.92% | 26.92% |
| Minimum July 1, 2015 Rate | 21.54% | 16.16% |
| Maximum July 1, 2015 Rate | 32.30% | 37.68% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 20 |
| Amortization factor | 12.511 | 13.327 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 22.71% | 16.25% | 16.25% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 25.91% | 17.92% | 17.92% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $245,867,252 | $273,110,696 | $27,243,444 | 90% | $32,956,073 | 83% |
| 12/31/2007 | 257,453,956 | 278,160,157 | 20,706,201 | 93% | 34,778,039 | 60% |
| 12/31/2008 | 188,893,782 | 281,553,582 | 92,659,800 | 67% | 35,686,738 | 260% |
| 12/31/2009 | 208,718,948 | 290,442,448 | 81,723,500 | 72% | 37,857,319 | 216% |
| 12/31/2010 | 219,929,139 | 301,199,612 | 81,270,473 | 73% | 40,283,981 | 202% |
| 12/31/2011 | 212,836,317 | 306,418,228 | 93,581,912 | 69% | 41,865,384 | 224% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Eugene Water & Electric Board*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $98,514,731 | $86,600,492 |
| Allocated pooled OPSRP UAL | 714,323 | 500,176 |
| Side account | 4,932,819 | 5,330,019 |
| Net unfunded pension actuarial accrued liability | 94,296,235 | 81,770,649 |
| Combined valuation payroll | 41,865,384 | 40,283,981 |
| Net pension UAL as a percentage of payroll | 225% | 203% |
| Calculated side account rate relief | (1.01%) | (1.09%) |
| Allocated pooled RHIA UAL | $1,084,544 | $1,449,354 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $1,933,416 | $1,749,605 |
| Tier 1/Tier 2 valuation payroll | 24,199,803 | 25,116,704 |
| Tier 1/Tier 2 pension normal cost rate | 7.99% | 6.97% |
| Tier 1/ Tier 2 Actuarial accrued liability | $306,418,228 | $301,199,612 |
| Actuarial asset value | 207,903,497 | 214,599,120 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 98,514,731 | 86,600,492 |
| Tier 1/ Tier 2 Funded status | 68% | 71% |
| Combined valuation payroll | $41,865,384 | $40,283,981 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 235% | 215% |
| Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10) | 18.93% | 16.83% |
| Tier 1/Tier 2 active members [1] | 282 | 306 |
| Tier 1/Tier 2 dormant members | 74 | 79 |
| Tier 1/Tier 2 retirees and beneficiaries | 557 | 535 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | **$5,330,019** | **$5,330,019** |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | (1,000) | (1,000) |
| 4. Amount transferred to employer reserves during 2011 | | (539,660) | (539,660) |
| 5. Side account earnings during 2011 | | 143,460 | 143,460 |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | **$4,932,819** | **$4,932,819** |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $4,932,819 | $5,330,019 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$4,932,819** | **$5,330,019** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $4,932,819 | $5,330,019 |
| 2. Combined valuation payroll | 41,865,384 | 40,283,981 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | (1.01%) | (1.09%) |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $24,017,019 | $28,892,373 |
| 2. Employer reserves | 58,604,134 | 56,675,157 |
| 3. Benefits in force reserve | 125,282,345 | 129,031,590 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$207,903,497** | **$214,599,120** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $214,599,120 |
| 2. Regular employer contributions | 7,085,576 |
| 3. Benefit payments and expenses | (20,990,192) |
| 4. Adjustments [2] | 1,158,504 |
| 5. Interest credited | 5,510,830 |
| 6. Total transferred from side accounts | 539,660 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$207,903,497** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 637,519 | 526,576 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 1,295,897 | 1,223,029 |
| **Total** | **$1,933,416** | **$1,749,605** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $1,933,416 | $1,933,416 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 51,029,269 | 58,627,903 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 13,531,405 | 12,097,230 |
| ▪ **Total Active Members** | **$64,560,674** | **$70,725,133** |
| Dormant Members | 14,002,027 | 18,017,211 |
| Retired Members and Beneficiaries | 227,855,527 | 212,457,268 |
| **Total Actuarial Accrued Liability** | **$306,418,228** | **$301,199,612** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $306,418,228 | $306,418,228 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $306,418,228 | $301,199,612 |
| 2. Actuarial value of assets | 207,903,497 | 214,599,120 |
| 3. Unfunded accrued liability *(1. – 2.)* | 98,514,731 | 86,600,492 |
| 4. Funded percentage *(2. ÷ 1.)* | 68% | 71% |
| 5. Combined valuation payroll | $41,865,384 | $40,283,981 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 235% | 215% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $18,982,029 | $1,564,323 | $1,451,972 | $18,869,678 | $1,622,985 |
| December 31, 2009 | $68,182,027 | $5,208,390 | $5,232,850 | $68,206,487 | $5,403,705 |
| December 31, 2011 | N/A | N/A | N/A | $11,438,566 | $844,736 |
| **Total** | | | | **$98,514,731** | **$7,871,426** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $301,199,612 |
| b. Normal cost at December 31, 2010 | 1,749,605 |
| c. Benefit payments during 2011 | (20,852,610) |
| d. Interest at 8.0% to December 31, 2011 | 23,401,833 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 305,498,440 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 305,498,440 |
| 2. Actuarial accrued liability at December 31, 2011 | 306,418,228 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (919,788) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 214,599,120 |
| b. Contributions for 2011[1] | 7,625,236 |
| c. Benefit payments and expenses during 2011 | (20,990,192) |
| d. Interest at 8.0% to December 31, 2011 | 16,633,331 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 217,867,494 |
| 5. Actuarial value of assets at December 31, 2011 | 207,903,497 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (9,963,997) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($10,883,785)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$86,600,492** |
| 2. Expected increase | 1,030,454 |
| 3. Liability (gain)/loss | 919,788 |
| 4. Asset (gain)/loss | 9,963,997 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$98,514,731** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 637,519 | 11,902,737 | 5.36% | 526,576 | 13,111,428 | 4.02% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 1,295,897 | 12,297,066 | 10.54% | 1,223,029 | 12,005,276 | 10.19% |
| **Total** | **$1,933,416** | **$24,199,803** | **7.99%** | **$1,749,605** | **$25,116,704** | **6.97%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $98,514,731 | $86,600,492 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 7,871,426 | 6,731,094 |
| 3. Combined valuation payroll | 41,865,384 | 40,283,981 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 18.80% | 16.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.99% | 6.97% |
| b. Tier 1/Tier 2 UAL rate | 18.80% | 16.71% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 26.92% | 23.80% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 22.71% |
| 2. Employer contribution rate attributable to side accounts | (1.11%) |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 23.82% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 4.76% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 4.76% |
| c. Funded percentage | 68% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 9.52% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 14.30% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 33.34% |
| 7. July 1, 2013 total pension rate, before adjustment | 26.92% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 18.80% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 18.80% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 26.92% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.99% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.99% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 26.92% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.99% | 6.97% |
| b. Tier 1/Tier 2 UAL rate | 18.80% | 16.71% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 26.92% | 23.80% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $11,902,737 | $0 | $11,902,737 |
| Tier 2 | 12,297,066 | 0 | 12,297,066 |
| Tier 1/Tier 2 valuation payroll | 24,199,803 | 0 | 24,199,803 |
| OPSRP valuation payroll | 17,665,581 | 0 | 17,665,581 |
| **Combined valuation payroll** | **$41,865,384** | **$0** | **$41,865,384** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 135 | 147 | 255 | 537 | 156 | 150 | 214 | 520 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 135 | 147 | 255 | 537 | 156 | 150 | 214 | 520 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 10 | 8 | N/A | 18 | 15 | 12 | N/A | 27 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 10 | 8 | N/A | 18 | 15 | 12 | N/A | 27 |
| **Dormant Members** | | | | | | | | |
| General Service | 46 | 28 | 8 | 82 | 54 | 25 | 4 | 83 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 46 | 28 | 8 | 82 | 54 | 25 | 4 | 83 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 528 | 27 | 1 | 556 | 521 | 12 | 1 | 534 |
| Police & Fire | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Total | 530 | 27 | 1 | 558 | 523 | 12 | 1 | 536 |
| **Grand Total Number of Members** | **721** | **210** | **264** | **1,195** | **748** | **199** | **219** | **1,166** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 5 | 5 | | | | | | | **10** |
| **35-39** | | 6 | 10 | 2 | | | | | | **18** |
| **40-44** | | 11 | 17 | 6 | 2 | | | | | **36** |
| **45-49** | | 7 | 17 | 8 | 7 | 2 | | | | **41** |
| **50-54** | | 12 | 14 | 12 | 19 | 16 | 2 | | | **75** |
| **55-59** | | 7 | 13 | 14 | 16 | 13 | 4 | | | **67** |
| **60-64** | | 4 | 9 | 3 | 9 | 3 | 2 | 1 | | **31** |
| **65-69** | | 1 | 2 | | 1 | | | | | **4** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **53** | **87** | **45** | **54** | **34** | **8** | **1** | | **282** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 3 | 1,379 |
| **40-44** | 8 | 1,710 |
| **45-49** | 10 | 1,656 |
| **50-54** | 19 | 2,332 |
| **55-59** | 26 | 1,741 |
| **60-64** | 6 | 1,798 |
| **65-69** | | |
| **70-74** | 1 | 1,919 |
| **75+** | 1 | |
| **Total** | 74 | 1,847 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 2 | 503 |
| **45-49** | 2 | 1,231 |
| **50-54** | 12 | 4,012 |
| **55-59** | 78 | 3,565 |
| **60-64** | 133 | 3,310 |
| **65-69** | 99 | 3,441 |
| **70-74** | 77 | 2,701 |
| **75-79** | 38 | 2,652 |
| **80-84** | 29 | 2,229 |
| **85-89** | 61 | 1,562 |
| **90-94** | 18 | 1,082 |
| **95-99** | 7 | 629 |
| **100+** | 1 | 1,255 |
| **Total** | 557 | 2,880 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Evans Valley Fire District #6/2623
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Evans Valley Fire District #6/2623

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Evans Valley Fire District #6 -- #2623

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Evans Valley Fire District #6 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Evans Valley Fire District #6.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Evans Valley Fire District #6*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 17.68% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (12.27%) | (12.27%) | (12.27%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.00%** | **0.00%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **0.49%** | **0.49%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 143%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 15 | 30 |
| Amortization factor | 11.033 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 2.25% | (14.78%) | (14.78%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (12.27%) | (12.27%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $405,865 | $208,280 | ($197,585) | 195% | $74,263 | (266%) |
| 12/31/2007 | 434,703 | 227,833 | (206,870) | 191% | 78,449 | (264%) |
| 12/31/2008 | 391,338 | 247,861 | (143,477) | 158% | 86,170 | (167%) |
| 12/31/2009 | 372,622 | 251,210 | (121,412) | 148% | 47,547 | (255%) |
| 12/31/2010 | 412,333 | 270,024 | (142,309) | 153% | 86,211 | (165%) |
| 12/31/2011 | 413,705 | 290,144 | (123,561) | 143% | 90,266 | (137%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Evans Valley Fire District #6*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($123,561) | ($142,309) |
| Allocated pooled OPSRP UAL | 1,540 | 1,070 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (122,021) | (141,239) |
| Combined valuation payroll | 90,266 | 86,211 |
| Net pension UAL as a percentage of payroll | (135%) | (164%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,338 | $3,102 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $8,975 | $8,600 |
| Tier 1/Tier 2 valuation payroll | 50,774 | 49,836 |
| Tier 1/Tier 2 pension normal cost rate | 17.68% | 19.25% |
| Tier 1/ Tier 2 Actuarial accrued liability | $290,144 | $270,024 |
| Actuarial asset value | 413,705 | 412,333 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (123,561) | (142,309) |
| Tier 1/ Tier 2 Funded status | 143% | 153% |
| Combined valuation payroll | $90,266 | $86,211 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (137%) | (165%) |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | (12.27%) | (13.91%) |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 2 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 90,266 | 86,211 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $44,850 | $43,624 |
| 2. Employer reserves | 319,455 | 314,858 |
| 3. Benefits in force reserve | 49,401 | 53,851 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$413,705** | **$412,333** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $412,333 |
| 2. | Regular employer contributions | (2,340) |
| 3. | Benefit payments and expenses | (8,277) |
| 4. | Adjustments[2] | 3,216 |
| 5. | Interest credited | 8,773 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$413,705** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 8,975 | 8,600 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$8,975** | **$8,600** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $8,975 | $8,975 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $25,444 | $22,485 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 145,525 | 129,361 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$170,969** | **$151,846** |
| Dormant Members | 29,328 | 29,510 |
| Retired Members and Beneficiaries | 89,847 | 88,668 |
| **Total Actuarial Accrued Liability** | **$290,144** | **$270,024** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $290,144 | $290,144 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $290,144 | $270,024 |
| 2. Actuarial value of assets | 413,705 | 412,333 |
| 3. Unfunded accrued liability *(1. – 2.)* | (123,561) | (142,309) |
| 4. Funded percentage *(2. ÷ 1.)* | 143% | 153% |
| 5. Combined valuation payroll | $90,266 | $86,211 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (137%) | (165%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($211,979) | ($17,470) | ($16,215) | ($210,724) | ($18,125) |
| December 31, 2009 | $91,394 | $6,981 | $7,014 | $91,427 | $7,243 |
| December 31, 2011 | N/A | N/A | N/A | ($4,264) | ($315) |
| **Total** | | | | **($123,561)** | **($11,197)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $270,024 |
| b. Normal cost at December 31, 2010 | 8,600 |
| c. Benefit payments during 2011 | (8,223) |
| d. Interest at 8.0% to December 31, 2011 | 21,961 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 292,362 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 292,362 |
| 2. Actuarial accrued liability at December 31, 2011 | 290,144 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 2,218 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 412,333 |
| b. Contributions for 2011[1] | (2,340) |
| c. Benefit payments and expenses during 2011 | (8,277) |
| d. Interest at 8.0% to December 31, 2011 | 32,562 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 434,278 |
| 5. Actuarial value of assets at December 31, 2011 | 413,705 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (20,573) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($18,355)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($142,309)** |
| 2. Expected increase | 393 |
| 3. Liability (gain)/loss | (2,218) |
| 4. Asset (gain)/loss | 20,573 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($123,561)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 8,975 | 50,774 | 17.68% | 8,600 | 49,836 | 17.26% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$8,975** | **$50,774** | **17.68%** | **$8,600** | **$49,836** | **17.26%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($123,561) | ($142,309) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (11,197) | (12,093) |
| 3. Combined valuation payroll | 90,266 | 86,211 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (12.40%) | (14.03%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 17.68% | 17.26% |
| b. Tier 1/Tier 2 UAL rate | (12.40%) | (14.03%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 5.41% | 3.35% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 143% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 0.00% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.41% |
| 7. July 1, 2013 total pension rate, before adjustment | 5.41% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (12.40%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (12.40%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 5.41% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 17.68% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 17.68% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 17.68% | 19.25% |
| b. Tier 1/Tier 2 UAL rate | (12.40%) | (14.03%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 50,774 | 50,774 |
| Tier 1/Tier 2 valuation payroll | 0 | 50,774 | 50,774 |
| OPSRP valuation payroll | 0 | 39,492 | 39,492 |
| **Combined valuation payroll** | **$0** | **$90,266** | **$90,266** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| Total | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| Total | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Total | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 2 |
| Total | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 2 |
| **Grand Total Number of Members** | **3** | **3** | **1** | **7** | **2** | **4** | **1** | **7** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | 1 | | | | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | **1** | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | 1 | 642 |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 642 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 2 | 245 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 2 | 245 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Fern Ridge Community Library/2785
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Fern Ridge Community Library/2785

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Fern Ridge Community Library -- #2785

SEPTEMBER 2012

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# Executive Summary

Milliman has prepared this report for Fern Ridge Community Library to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Fern Ridge Community Library.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Fern Ridge Community Library*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 16.71% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (3.82%) | (3.82%) | (3.82%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.04%** | **2.60%** | **5.33%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.63%** | **3.09%** | **5.82%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 89%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.89% | 12.89% |
| Minimum July 1, 2015 Rate | 9.89% | 6.89% |
| Maximum July 1, 2015 Rate | 15.89% | 18.89% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 16 |
| Amortization factor | 17.175 | 11.407 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.89% | (4.01%) | (4.01%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.29% | 1.58% | 1.58% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $326,120 | $269,546 | ($56,573) | 121% | $121,375 | (47%) |
| 12/31/2007 | 323,375 | 198,976 | (124,399) | 163% | 81,822 | (152%) |
| 12/31/2008 | 255,668 | 212,322 | (43,346) | 120% | 129,190 | (34%) |
| 12/31/2009 | 309,834 | 243,714 | (66,120) | 127% | 139,914 | (47%) |
| 12/31/2010 | 353,205 | 385,193 | 31,988 | 92% | 181,132 | 18% |
| 12/31/2011 | 368,747 | 416,146 | 47,399 | 89% | 185,052 | 26% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Fern Ridge Community Library*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $47,399 | $31,988 |
| Allocated pooled OPSRP UAL | 3,157 | 2,249 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 50,556 | 34,237 |
| Combined valuation payroll | 185,052 | 181,132 |
| Net pension UAL as a percentage of payroll | 27% | 19% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $4,794 | $6,517 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $8,512 | $6,887 |
| Tier 1/Tier 2 valuation payroll | 50,953 | 49,696 |
| Tier 1/Tier 2 pension normal cost rate | 16.71% | 13.86% |
| Tier 1/ Tier 2 Actuarial accrued liability | $416,146 | $385,193 |
| Actuarial asset value | 368,747 | 353,205 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 47,399 | 31,988 |
| Tier 1/ Tier 2 Funded status | 89% | 92% |
| Combined valuation payroll | $185,052 | $181,132 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 26% | 18% |
| Tier 1/Tier 2 UAL rate | (3.82%) | (0.97%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 3 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 185,052 | 181,132 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $66,235 | $81,848 |
| 2. Employer reserves | 277,730 | 271,357 |
| 3. Benefits in force reserve | 24,781 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$368,747** | **$353,205** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $353,205 |
| 2. | Regular employer contributions | 19,447 |
| 3. | Benefit payments and expenses | (4,152) |
| 4. | Adjustments [2] | (9,912) |
| 5. | Interest credited | 10,158 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$368,747** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 4,566 | 4,442 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 3,946 | 2,445 |
| **Total** | **$8,512** | **$6,887** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $8,512 | $8,512 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 286,049 | 262,497 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 32,966 | 28,063 |
| ▪ **Total Active Members** | **$319,015** | **$290,560** |
| Dormant Members | 52,060 | 94,633 |
| Retired Members and Beneficiaries | 45,071 | 0 |
| **Total Actuarial Accrued Liability** | **$416,146** | **$385,193** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $416,146 | $416,146 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $416,146 | $385,193 |
| 2. Actuarial value of assets | 368,747 | 353,205 |
| 3. Unfunded accrued liability *(1. – 2.)* | 47,399 | 31,988 |
| 4. Funded percentage *(2. ÷ 1.)* | 89% | 92% |
| 5. Combined valuation payroll | $185,052 | $181,132 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 26% | 18% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($165,452) | ($13,635) | ($12,656) | ($164,473) | ($14,146) |
| December 31, 2009 | $100,063 | $7,643 | $7,680 | $100,100 | $7,930 |
| December 31, 2011 | N/A | N/A | N/A | $111,772 | $8,254 |
| **Total** | | | | **$47,399** | **$2,038** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $385,193 |
| b. Normal cost at December 31, 2010 | 6,887 |
| c. Benefit payments during 2011 | (4,125) |
| d. Interest at 8.0% to December 31, 2011 | 31,201 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 419,156 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 419,156 |
| 2. Actuarial accrued liability at December 31, 2011 | 416,146 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 3,010 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 353,205 |
| b. Contributions for 2011[1] | 19,447 |
| c. Benefit payments and expenses during 2011 | (4,152) |
| d. Interest at 8.0% to December 31, 2011 | 28,868 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 397,369 |
| 5. Actuarial value of assets at December 31, 2011 | 368,747 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (28,622) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($25,612)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$31,988** |
| 2. Expected increase | (10,201) |
| 3. Liability (gain)/loss | (3,010) |
| 4. Asset (gain)/loss | 28,622 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$47,399** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 4,566 | 32,506 | 14.05% | 4,442 | 32,011 | 13.88% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 3,946 | 18,447 | 21.39% | 2,445 | 17,685 | 13.83% |
| **Total** | **$8,512** | **$50,953** | **16.71%** | **$6,887** | **$49,696** | **13.86%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $47,399 | $31,988 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 2,038 | 1,199 |
| 3. Combined valuation payroll | 185,052 | 181,132 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 1.10% | 0.66% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.71% | 13.86% |
| b. Tier 1/Tier 2 UAL rate | 1.10% | 0.66% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.94% | 14.64% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 9.89% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.89% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.98% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 89% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 6.89% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 12.89% |
| 7. July 1, 2013 total pension rate, before adjustment | 17.94% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (5.05%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 1.10% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (3.95%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.89% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 16.71% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 16.71% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.89% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.71% | 13.86% |
| b. Tier 1/Tier 2 UAL rate | (3.95%) | (1.09%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 12.89% | 12.89% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $32,506 | $0 | $32,506 |
| Tier 2 | 18,447 | 0 | 18,447 |
| Tier 1/Tier 2 valuation payroll | 50,953 | 0 | 50,953 |
| OPSRP valuation payroll | 134,099 | 0 | 134,099 |
| **Combined valuation payroll** | **$185,052** | **$0** | **$185,052** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 1 | 4 | 7 | 2 | 1 | 4 | 7 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 1 | 4 | 7 | 2 | 1 | 4 | 7 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 2 | 0 | N/A | 2 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 2 | 0 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **6** | **2** | **4** | **12** | **6** | **2** | **4** | **12** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | 1 | | | | | | **1** |
| **65-69** | | | 1 | | | | | | | **1** |
| **70-74** | | | | | | 1 | | | | **1** |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | **1** | | **1** | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 1 | 763 |
| **40-44** | | |
| **45-49** | | |
| **50-54** | 2 | 159 |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 3 | 360 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | 1 | 276 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 1 | 276 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Gaston Rural Fire Protection District/2608
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Gaston Rural Fire Protection District/2608

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Gaston Rural Fire Protection District/2608

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Gaston Rural Fire Protection District -- #2608

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Gaston Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Gaston Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Gaston Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.95% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.96% | 0.96% | 0.96% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.06%** | **7.38%** | **10.11%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.65%** | **7.87%** | **10.60%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 89%.

| **Funded Status as of December 31, 2013** | **80% to 120%** | **Under 70% or Over 130%** |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.91% | 13.91% |
| Minimum July 1, 2015 Rate | 10.91% | 7.91% |
| Maximum July 1, 2015 Rate | 16.91% | 19.91% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.35% | 3.35% | 3.35% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.43% | 2.48% | 2.48% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $390,371 | $371,365 | ($19,006) | 105% | $69,901 | (27%) |
| 12/31/2007 | 404,178 | 389,940 | (14,237) | 104% | 56,252 | (25%) |
| 12/31/2008 | 286,682 | 375,548 | 88,866 | 76% | 95,337 | 93% |
| 12/31/2009 | 323,110 | 371,017 | 47,907 | 87% | 85,462 | 56% |
| 12/31/2010 | 341,306 | 375,975 | 34,669 | 91% | 100,211 | 35% |
| 12/31/2011 | 330,317 | 371,521 | 41,204 | 89% | 100,398 | 41% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Gaston Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $41,204 | $34,669 |
| Allocated pooled OPSRP UAL | 1,713 | 1,244 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 42,917 | 35,913 |
| Combined valuation payroll | 100,398 | 100,211 |
| Net pension UAL as a percentage of payroll | 43% | 36% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,601 | $3,605 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $29 | $0 |
| Tier 1/Tier 2 valuation payroll | 224 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 12.95% | 10.30% |
| Tier 1/ Tier 2 Actuarial accrued liability | $371,521 | $375,975 |
| Actuarial asset value | 330,317 | 341,306 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 41,204 | 34,669 |
| Tier 1/ Tier 2 Funded status | 89% | 91% |
| Combined valuation payroll | $100,398 | $100,211 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 41% | 35% |
| Tier 1/Tier 2 UAL rate | 0.96% | 2.69% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 1 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 2 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 100,398 | 100,211 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $31,991 | $31,645 |
| 2. Employer reserves | 174,627 | 171,936 |
| 3. Benefits in force reserve | 123,698 | 137,726 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$330,317** | **$341,306** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $341,306 |
| 2. | Regular employer contributions | (499) |
| 3. | Benefit payments and expenses | (20,725) |
| 4. | Adjustments[2] | 2,888 |
| 5. | Interest credited | 7,346 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$330,317** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 24 | 0 |
| Tier 2 Police & Fire | 5 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$29** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $29 | $29 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $115,283 | $118,271 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 28,053 | 24,666 |
| ▪ Tier 2 General Service | 2,069 | 0 |
| ▪ **Total Active Members** | **$145,405** | **$142,937** |
| Dormant Members | 1,142 | 6,266 |
| Retired Members and Beneficiaries | 224,974 | 226,772 |
| **Total Actuarial Accrued Liability** | **$371,521** | **$375,975** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $371,521 | $371,521 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $371,521 | $375,975 |
| 2. Actuarial value of assets | 330,317 | 341,306 |
| 3. Unfunded accrued liability *(1. – 2.)* | 41,204 | 34,669 |
| 4. Funded percentage *(2. ÷ 1.)* | 89% | 91% |
| 5. Combined valuation payroll | $100,398 | $100,211 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 41% | 35% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($17,724) | ($1,461) | ($1,356) | ($17,619) | ($1,516) |
| December 31, 2009 | $65,875 | $5,032 | $5,056 | $65,899 | $5,221 |
| December 31, 2011 | N/A | N/A | N/A | ($7,076) | ($523) |
| **Total** | | | | **$41,204** | **$3,182** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $375,975 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | (20,589) |
| d. Interest at 8.0% to December 31, 2011 | 29,254 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 384,640 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 384,640 |
| 2. Actuarial accrued liability at December 31, 2011 | 371,521 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 13,119 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 341,306 |
| b. Contributions for 2011[1] | (499) |
| c. Benefit payments and expenses during 2011 | (20,725) |
| d. Interest at 8.0% to December 31, 2011 | 26,456 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 346,539 |
| 5. Actuarial value of assets at December 31, 2011 | 330,317 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (16,222) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($3,103)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$34,669** |
| 2. Expected increase | 3,432 |
| 3. Liability (gain)/loss | (13,119) |
| 4. Asset (gain)/loss | 16,222 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$41,204** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 24 | 186 | 12.90% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 5 | 38 | 13.16% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$29** | **$224** | **12.95%** | **$0** | **$0** | **10.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $41,204 | $34,669 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 3,182 | 2,575 |
| 3. Combined valuation payroll | 100,398 | 100,211 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.17% | 2.57% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.95% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | 3.17% | 2.57% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.25% | 12.99% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.91% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.91% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.18% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 89% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.91% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.91% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.25% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.34%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.17% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.83% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.91% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.95% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.95% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.91% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.95% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | 0.83% | 2.57% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 13.91% | 12.99% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $186 | $0 | $186 |
| Tier 2 | 0 | 38 | 38 |
| Tier 1/Tier 2 valuation payroll | 186 | 38 | 224 |
| OPSRP valuation payroll | 15,922 | 84,252 | 100,174 |
| **Combined valuation payroll** | **$16,108** | **$84,290** | **$100,398** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Police & Fire | 0 | 0 | 2 | 2 | 0 | 0 | 3 | 3 |
| Total | 0 | 0 | 3 | 3 | 0 | 0 | 4 | 4 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 1 | N/A | 2 | 1 | 0 | N/A | 1 |
| Police & Fire | 3 | 1 | N/A | 4 | 4 | 2 | N/A | 6 |
| Total | 4 | 2 | N/A | 6 | 5 | 2 | N/A | 7 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Police & Fire | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Total | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Total | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| **Grand Total Number of Members** | **6** | **3** | **3** | **12** | **7** | **5** | **4** | **16** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 1 | 103 |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 1 | 103 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 147 |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | 1 | 2,007 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 2 | 1,077 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Halsey Shedd Rural Fire Protection District/2698
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Halsey Shedd Rural Fire Protection District/2698

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Halsey Shedd Rural Fire Protection District -- #2698

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Halsey Shedd Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Halsey Shedd Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Halsey Shedd Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.38% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (7.97%) | (7.97%) | (7.97%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.00%** | **1.18%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **0.49%** | **1.67%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 122%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 21 | 15 |
| Amortization factor | 13.882 | 11.256 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.91% | (4.72%) | (4.72%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (7.97%) | (7.97%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $450,583 | $319,266 | ($131,317) | 141% | $149,948 | (88%) |
| 12/31/2007 | 499,296 | 337,646 | (161,650) | 148% | 112,159 | (144%) |
| 12/31/2008 | 403,149 | 365,385 | (37,764) | 110% | 117,247 | (32%) |
| 12/31/2009 | 476,525 | 409,622 | (66,903) | 116% | 122,435 | (55%) |
| 12/31/2010 | 530,634 | 425,296 | (105,338) | 125% | 81,326 | (130%) |
| 12/31/2011 | 547,694 | 449,945 | (97,749) | 122% | 108,670 | (90%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Halsey Shedd Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($97,749) | ($105,338) |
| Allocated pooled OPSRP UAL | 1,854 | 1,010 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (95,895) | (104,328) |
| Combined valuation payroll | 108,670 | 81,326 |
| Net pension UAL as a percentage of payroll | (88%) | (128%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,815 | $2,926 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $9,337 | $8,413 |
| Tier 1/Tier 2 valuation payroll | 82,762 | 81,326 |
| Tier 1/Tier 2 pension normal cost rate | 13.38% | 14.27% |
| Tier 1/ Tier 2 Actuarial accrued liability | $449,945 | $425,296 |
| Actuarial asset value | 547,694 | 530,634 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (97,749) | (105,338) |
| Tier 1/ Tier 2 Funded status | 122% | 125% |
| Combined valuation payroll | $108,670 | $81,326 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (90%) | (130%) |
| Tier 1/Tier 2 UAL rate | (7.97%) | (8.93%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 0 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 108,670 | 81,326 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $151,444 | $143,647 |
| 2. Employer reserves | 368,194 | 356,388 |
| 3. Benefits in force reserve | 28,056 | 30,599 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$547,694** | **$530,634** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $530,634 |
| 2. Regular employer contributions | 3,827 |
| 3. Benefit payments and expenses | (4,701) |
| 4. Adjustments[2] | (369) |
| 5. Interest credited | 18,302 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$547,694** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $7,709 | $6,941 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 1,628 | 1,472 |
| **Total** | **$9,337** | **$8,413** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $9,337 | $9,337 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $362,524 | $335,090 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 10,191 | 9,012 |
| ▪ Tier 2 General Service | 26,204 | 19,176 |
| ▪ **Total Active Members** | **$398,919** | **$363,278** |
| Dormant Members | 0 | 11,635 |
| Retired Members and Beneficiaries | 51,026 | 50,383 |
| **Total Actuarial Accrued Liability** | **$449,945** | **$425,296** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $449,945 | $449,945 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $449,945 | $425,296 |
| 2. Actuarial value of assets | 547,694 | 530,634 |
| 3. Unfunded accrued liability *(1. – 2.)* | (97,749) | (105,338) |
| 4. Funded percentage *(2. ÷ 1.)* | 122% | 125% |
| 5. Combined valuation payroll | $108,670 | $81,326 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (90%) | (130%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($182,020) | ($15,001) | ($13,923) | ($180,942) | ($15,564) |
| December 31, 2009 | $115,940 | $8,856 | $8,898 | $115,982 | $9,188 |
| December 31, 2011 | N/A | N/A | N/A | ($32,789) | ($2,421) |
| **Total** | | | | **($97,749)** | **($8,797)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $425,296 |
| b. Normal cost at December 31, 2010 | 8,413 |
| c. Benefit payments during 2011 | (4,670) |
| d. Interest at 8.0% to December 31, 2011 | 34,510 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 463,549 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 463,549 |
| 2. Actuarial accrued liability at December 31, 2011 | 449,945 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 13,604 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 530,634 |
| b. Contributions for 2011[1] | 3,827 |
| c. Benefit payments and expenses during 2011 | (4,701) |
| d. Interest at 8.0% to December 31, 2011 | 42,416 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 572,177 |
| 5. Actuarial value of assets at December 31, 2011 | 547,694 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (24,483) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($10,879)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($105,338)** |
| 2. Expected increase | (3,290) |
| 3. Liability (gain)/loss | (13,604) |
| 4. Asset (gain)/loss | 24,483 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($97,749)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $7,709 | $67,300 | 11.45% | $6,941 | $66,306 | 10.47% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 1,628 | 15,462 | 10.53% | 1,472 | 15,020 | 9.80% |
| **Total** | **$9,337** | **$82,762** | **11.28%** | **$8,413** | **$81,326** | **10.34%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($97,749) | ($105,338) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (8,797) | (9,044) |
| 3. Combined valuation payroll | 108,670 | 81,326 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (8.10%) | (11.12%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.28% | 10.34% |
| b. Tier 1/Tier 2 UAL rate | (8.10%) | (11.12%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 3.31% | (0.66%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.91% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.91% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.18% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 122% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.60% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.31% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 9.51% |
| 7. | July 1, 2013 total pension rate, before adjustment | 3.31% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (8.10%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (8.10%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 3.31% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 2.10% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 11.28% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.38% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.38% | 14.27% |
| b. Tier 1/Tier 2 UAL rate | (8.10%) | (9.05%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 5.41% | 5.34% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $67,300 | $67,300 |
| Tier 2 | 15,462 | 0 | 15,462 |
| Tier 1/Tier 2 valuation payroll | 15,462 | 67,300 | 82,762 |
| OPSRP valuation payroll | 0 | 25,908 | 25,908 |
| **Combined valuation payroll** | **$15,462** | **$93,208** | **$108,670** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| Total | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| Total | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **3** | **2** | **1** | **6** | **3** | **3** | **0** | **6** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | 1 | | | | | | | **1** |
| 50-54 | | | | | 1 | | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | **1** | | **1** | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | 1 | 271 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 1 | 271 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Harbor Water PUD/2771
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Harbor Water PUD/2771

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Harbor Water PUD -- #2771

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Harbor Water PUD to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Harbor Water PUD.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Harbor Water PUD*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 10.16% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.09%) | (2.09%) | (2.09%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.22%** | **4.33%** | **7.06%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **8.81%** | **4.82%** | **7.55%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 108%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.07% | 8.07% |
| Minimum July 1, 2015 Rate | 5.07% | 2.07% |
| Maximum July 1, 2015 Rate | 11.07% | 14.07% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 12 | 15 |
| Amortization factor | 9.165 | 11.002 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.56% | (2.30%) | (2.30%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.07% | (2.09%) | (2.09%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $513,731 | $378,068 | ($135,663) | 136% | $227,247 | (60%) |
| 12/31/2007 | 589,230 | 415,659 | (173,571) | 142% | 236,805 | (73%) |
| 12/31/2008 | 488,851 | 453,510 | (35,341) | 108% | 214,357 | (16%) |
| 12/31/2009 | 585,164 | 519,548 | (65,616) | 113% | 244,669 | (27%) |
| 12/31/2010 | 661,768 | 565,410 | (96,358) | 117% | 243,658 | (40%) |
| 12/31/2011 | 685,356 | 635,506 | (49,850) | 108% | 241,212 | (21%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Harbor Water PUD*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($49,850) | ($96,358) |
| Allocated pooled OPSRP UAL | 4,116 | 3,025 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (45,734) | (93,333) |
| Combined valuation payroll | 241,212 | 243,658 |
| Net pension UAL as a percentage of payroll | (19%) | (38%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $6,249 | $8,766 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $23,951 | $22,341 |
| Tier 1/Tier 2 valuation payroll | 235,794 | 240,157 |
| Tier 1/Tier 2 pension normal cost rate | 10.16% | 9.30% |
| Tier 1/ Tier 2 Actuarial accrued liability | $635,506 | $565,410 |
| Actuarial asset value | 685,356 | 661,768 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (49,850) | (96,358) |
| Tier 1/ Tier 2 Funded status | 108% | 117% |
| Combined valuation payroll | $241,212 | $243,658 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (21%) | (40%) |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | (2.09%) | (3.36%) |
| Tier 1/Tier 2 active members [1] | 3 | 4 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### OPSRP

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### Retiree Healthcare

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 241,212 | 243,658 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $189,489 | $187,950 |
| 2. Employer reserves | 469,352 | 473,818 |
| 3. Benefits in force reserve | 26,516 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$685,356** | **$661,768** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $661,768 |
| 2. | Regular employer contributions | 14,237 |
| 3. | Benefit payments and expenses | (4,443) |
| 4. | Adjustments[2] | (12,062) |
| 5. | Interest credited | 25,856 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$685,356** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 14,211 | 11,056 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 9,740 | 11,285 |
| **Total** | **$23,951** | **$22,341** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $23,951 | $23,951 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 495,132 | 456,625 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 92,149 | 108,785 |
| ▪ **Total Active Members** | **$587,281** | **$565,410** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 48,225 | 0 |
| **Total Actuarial Accrued Liability** | **$635,506** | **$565,410** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $635,506 | $635,506 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $635,506 | $565,410 |
| 2. Actuarial value of assets | 685,356 | 661,768 |
| 3. Unfunded accrued liability *(1. – 2.)* | (49,850) | (96,358) |
| 4. Funded percentage *(2. ÷ 1.)* | 108% | 117% |
| 5. Combined valuation payroll | $241,212 | $243,658 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (21%) | (40%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($197,907) | ($16,309) | ($15,138) | ($196,736) | ($16,921) |
| December 31, 2009 | $133,205 | $10,176 | $10,223 | $133,252 | $10,558 |
| December 31, 2011 | N/A | N/A | N/A | $13,634 | $1,007 |
| **Total** | | | | **($49,850)** | **($5,356)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $565,410 |
| b. Normal cost at December 31, 2010 | 22,341 |
| c. Benefit payments during 2011 | (4,413) |
| d. Interest at 8.0% to December 31, 2011 | 46,844 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 630,182 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 630,182 |
| 2. Actuarial accrued liability at December 31, 2011 | 635,506 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (5,324) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 661,768 |
| b. Contributions for 2011[1] | 14,237 |
| c. Benefit payments and expenses during 2011 | (4,443) |
| d. Interest at 8.0% to December 31, 2011 | 53,333 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 724,896 |
| 5. Actuarial value of assets at December 31, 2011 | 685,356 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (39,539) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($44,863)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($96,358)** |
| 2. Expected increase | 1,645 |
| 3. Liability (gain)/loss | 5,324 |
| 4. Asset (gain)/loss | 39,539 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($49,850)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 14,211 | 163,927 | 8.67% | 11,056 | 156,512 | 7.06% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 9,740 | 71,867 | 13.55% | 11,285 | 83,645 | 13.49% |
| **Total** | **$23,951** | **$235,794** | **10.16%** | **$22,341** | **$240,157** | **9.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($49,850) | ($96,358) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (5,356) | (8,471) |
| 3. Combined valuation payroll | 241,212 | 243,658 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.22%) | (3.48%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.16% | 9.30% |
| b. Tier 1/Tier 2 UAL rate | (2.22%) | (3.48%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 8.07% | 5.94% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 7.56% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.56% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.51% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 108% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.56% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 10.56% |
| 7. | July 1, 2013 total pension rate, before adjustment | 8.07% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.22%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.22%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.07% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.16% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.16% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.07% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.16% | 9.30% |
| b. Tier 1/Tier 2 UAL rate | (2.22%) | (3.48%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 8.07% | 5.94% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $163,927 | $0 | $163,927 |
| Tier 2 | 71,867 | 0 | 71,867 |
| Tier 1/Tier 2 valuation payroll | 235,794 | 0 | 235,794 |
| OPSRP valuation payroll | 5,418 | 0 | 5,418 |
| **Combined valuation payroll** | **$241,212** | **$0** | **$241,212** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 1 | 1 | 4 | 2 | 2 | 2 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 1 | 1 | 4 | 2 | 2 | 2 | 6 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **2** | **2** | **1** | **5** | **2** | **2** | **2** | **6** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | 1 | | | | | | 1 |
| 55-59 | | 1 | | | | | | | | 1 |
| 60-64 | | | | 1 | | | | | | 1 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | 1 | | 2 | | | | | | 3 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 336 |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 1 | 336 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Hermiston Rural Fire Protection District/2815
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Hermiston Rural Fire Protection District/2815

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

Hermiston Rural Fire Protection District -- #2815

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Hermiston Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Hermiston Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Hermiston Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.91% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.15% | 2.15% | 2.15% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **15.21%** | **8.57%** | **11.30%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.80%** | **9.06%** | **11.79%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 87%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 15.06% | 15.06% |
| Minimum July 1, 2015 Rate | 12.05% | 9.04% |
| Maximum July 1, 2015 Rate | 18.07% | 21.08% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 18 | 20 |
| Amortization factor | 12.638 | 13.623 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.37% | 2.30% | 2.30% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.06% | 2.15% | 2.15% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,992,339 | $1,977,230 | ($15,108) | 101% | $1,590,597 | (1%) |
| 12/31/2007 | 2,545,895 | 2,765,065 | 219,170 | 92% | 1,461,780 | 15% |
| 12/31/2008 | 2,018,646 | 3,338,525 | 1,319,879 | 60% | 1,576,005 | 84% |
| 12/31/2009 | 2,571,679 | 3,104,973 | 533,294 | 83% | 1,788,434 | 30% |
| 12/31/2010 | 3,094,148 | 3,421,790 | 327,642 | 90% | 1,825,539 | 18% |
| 12/31/2011 | 3,353,245 | 3,852,024 | 498,779 | 87% | 1,943,699 | 26% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Hermiston Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $498,779 | $327,642 |
| Allocated pooled OPSRP UAL | 33,164 | 22,666 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 531,943 | 350,308 |
| Combined valuation payroll | 1,943,699 | 1,825,539 |
| Net pension UAL as a percentage of payroll | 27% | 19% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $50,353 | $65,680 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $192,868 | $172,167 |
| Tier 1/Tier 2 valuation payroll | 1,494,398 | 1,459,000 |
| Tier 1/Tier 2 pension normal cost rate | 12.91% | 11.80% |
| Tier 1/ Tier 2 Actuarial accrued liability | $3,852,024 | $3,421,790 |
| Actuarial asset value | 3,353,245 | 3,094,148 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 498,779 | 327,642 |
| Tier 1/ Tier 2 Funded status | 87% | 90% |
| Combined valuation payroll | $1,943,699 | $1,825,539 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 26% | 18% |
| Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10) | 2.15% | 1.50% |
| Tier 1/Tier 2 active members [1] | 17 | 18 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 7 | 7 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,943,699 | 1,825,539 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $405,831 | $411,479 |
| 2. Employer reserves | 2,552,535 | 2,252,657 |
| 3. Benefits in force reserve | 394,880 | 430,011 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$3,353,245** | **$3,094,148** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $3,094,148 |
| 2. | Regular employer contributions | 245,491 |
| 3. | Benefit payments and expenses | (66,159) |
| 4. | Adjustments[2] | 820 |
| 5. | Interest credited | 78,946 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$3,353,245** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $83,703 | $61,128 |
| Tier 1 General Service | 242 | 215 |
| Tier 2 Police & Fire | 108,905 | 110,218 |
| Tier 2 General Service | 18 | 606 |
| **Total** | **$192,868** | **$172,167** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $192,868 | $192,868 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $1,681,988 | $1,386,003 |
| ▪ Tier 1 General Service | 120,465 | 109,486 |
| ▪ Tier 2 Police & Fire | 1,280,035 | 1,171,567 |
| ▪ Tier 2 General Service | 25,270 | 21,722 |
| ▪ **Total Active Members** | **$3,107,758** | **$2,688,778** |
| Dormant Members | 26,084 | 24,975 |
| Retired Members and Beneficiaries | 718,182 | 708,037 |
| **Total Actuarial Accrued Liability** | **$3,852,024** | **$3,421,790** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $3,852,024 | $3,852,024 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $3,852,024 | $3,421,790 |
| 2. Actuarial value of assets | 3,353,245 | 3,094,148 |
| 3. Unfunded accrued liability *(1. – 2.)* | 498,779 | 327,642 |
| 4. Funded percentage *(2. ÷ 1.)* | 87% | 90% |
| 5. Combined valuation payroll | $1,943,699 | $1,825,539 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 26% | 18% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($63,698) | ($5,249) | ($4,872) | ($63,321) | ($5,446) |
| December 31, 2009 | $598,952 | $45,754 | $45,968 | $599,166 | $47,470 |
| December 31, 2011 | N/A | N/A | N/A | ($37,066) | ($2,737) |
| **Total** | | | | **$498,779** | **$39,287** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,421,790 |
| b. Normal cost at December 31, 2010 | 172,167 |
| c. Benefit payments during 2011 | (65,726) |
| d. Interest at 8.0% to December 31, 2011 | 284,888 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,813,119 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,813,119 |
| 2. Actuarial accrued liability at December 31, 2011 | 3,852,024 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (38,905) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,094,148 |
| b. Contributions for 2011[1] | 245,491 |
| c. Benefit payments and expenses during 2011 | (66,159) |
| d. Interest at 8.0% to December 31, 2011 | 254,705 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,528,185 |
| 5. Actuarial value of assets at December 31, 2011 | 3,353,245 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (174,939) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($213,844)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$327,642** |
| 2. Expected increase | (42,707) |
| 3. Liability (gain)/loss | 38,905 |
| 4. Asset (gain)/loss | 174,939 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$498,779** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $83,703 | $608,185 | 13.76% | $61,128 | $533,183 | 11.46% |
| Tier 1 General Service | 242 | 60,097 | 0.40% | 215 | 57,787 | 0.37% |
| Tier 2 Police & Fire | 108,905 | 825,958 | 13.19% | 110,218 | 863,156 | 12.77% |
| Tier 2 General Service | 18 | 158 | 11.39% | 606 | 4,874 | 12.43% |
| **Total** | **$192,868** | **$1,494,398** | **12.91%** | **$172,167** | **$1,459,000** | **11.80%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $498,779 | $327,642 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 39,287 | 25,173 |
| 3. Combined valuation payroll | 1,943,699 | 1,825,539 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.02% | 1.38% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.91% | 11.80% |
| b. Tier 1/Tier 2 UAL rate | 2.02% | 1.38% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 15.06% | 13.30% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 14.37% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.37% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.87% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 87% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.37% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 17.37% |
| 7. | July 1, 2013 total pension rate, before adjustment | 15.06% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.02% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.02% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 15.06% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.91% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.91% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 15.06% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.91% | 11.80% |
| b. Tier 1/Tier 2 UAL rate | 2.02% | 1.38% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 15.06% | 13.30% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $60,097 | $608,185 | $668,282 |
| Tier 2 | 158 | 825,958 | 826,116 |
| Tier 1/Tier 2 valuation payroll | 60,255 | 1,434,143 | 1,494,398 |
| OPSRP valuation payroll | 482 | 448,819 | 449,301 |
| **Combined valuation payroll** | **$60,737** | **$1,882,962** | **$1,943,699** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| Police & Fire | 6 | 10 | 6 | 22 | 6 | 11 | 5 | 22 |
| Total | 7 | 10 | 7 | 24 | 7 | 11 | 5 | 23 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 3 | N/A | 4 | 1 | 4 | N/A | 5 |
| Police & Fire | 2 | 6 | N/A | 8 | 2 | 6 | N/A | 8 |
| Total | 3 | 9 | N/A | 12 | 3 | 10 | N/A | 13 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 7 | 0 | 0 | 7 | 7 | 0 | 0 | 7 |
| Total | 7 | 0 | 0 | 7 | 7 | 0 | 0 | 7 |
| **Grand Total Number of Members** | **18** | **20** | **7** | **45** | **18** | **22** | **5** | **45** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 2 | 1 | | | | | | | 3 |
| 35-39 | | | 1 | | | | | | | 1 |
| 40-44 | | 1 | 2 | | | | | | | 3 |
| 45-49 | | | 1 | 2 | 3 | 1 | | | | 7 |
| 50-54 | | | 1 | | | | | | | 1 |
| 55-59 | | 1 | | | | | | | | 1 |
| 60-64 | | | | | | 1 | | | | 1 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | 4 | 6 | 2 | 3 | 2 | | | | 17 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | 190 |
| 45-49 | 1 | 186 |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 2 | 188 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 4 | 929 |
| 60-64 | 1 | 66 |
| 65-69 | 1 | |
| 70-74 | 1 | 415 |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 7 | 600 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Ice Fountain Water District/2717
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Ice Fountain Water District/2717

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Ice Fountain Water District -- #2717

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Ice Fountain Water District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Ice Fountain Water District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Ice Fountain Water District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.54% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 1.17% | 1.17% | 1.17% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.86%** | **7.59%** | **10.32%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.45%** | **8.08%** | **10.81%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 90%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.71% | 11.71% |
| Minimum July 1, 2015 Rate | 8.71% | 5.71% |
| Maximum July 1, 2015 Rate | 14.71% | 17.71% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.49% | 1.72% | 1.72% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.41% | 1.87% | 1.87% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $610,494 | $522,198 | ($88,297) | 117% | $193,525 | (46%) |
| 12/31/2007 | 681,704 | 556,515 | (125,189) | 123% | 148,987 | (84%) |
| 12/31/2008 | 528,847 | 615,835 | 86,988 | 86% | 160,298 | 54% |
| 12/31/2009 | 602,075 | 649,537 | 47,462 | 93% | 169,216 | 28% |
| 12/31/2010 | 642,750 | 676,412 | 33,662 | 95% | 180,977 | 19% |
| 12/31/2011 | 636,512 | 704,868 | 68,356 | 90% | 223,782 | 31% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Ice Fountain Water District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $68,356 | $33,662 |
| Allocated pooled OPSRP UAL | 3,818 | 2,247 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 72,174 | 35,909 |
| Combined valuation payroll | 223,782 | 180,977 |
| Net pension UAL as a percentage of payroll | 32% | 20% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $5,797 | $6,511 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $10,123 | $9,028 |
| Tier 1/Tier 2 valuation payroll | 96,031 | 93,258 |
| Tier 1/Tier 2 pension normal cost rate | 10.54% | 9.68% |
| Tier 1/ Tier 2 Actuarial accrued liability | $704,868 | $676,412 |
| Actuarial asset value | 636,512 | 642,750 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 68,356 | 33,662 |
| Tier 1/ Tier 2 Funded status | 90% | 95% |
| Combined valuation payroll | $223,782 | $180,977 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 31% | 19% |
| Tier 1/Tier 2 UAL rate | 1.17% | 1.09% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 223,782 | 180,977 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $81,602 | $78,027 |
| 2. Employer reserves | 320,273 | 307,389 |
| 3. Benefits in force reserve | 234,637 | 257,334 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$636,512** | **$642,750** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $642,750 |
| 2. Regular employer contributions | 6,050 |
| 3. Benefit payments and expenses | (39,312) |
| 4. Adjustments [2] | 10,540 |
| 5. Interest credited | 16,484 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$636,512** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 10,123 | 9,028 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$10,123** | **$9,028** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $10,123 | $10,123 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 278,125 | 252,698 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$278,125** | **$252,698** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 426,743 | 423,714 |
| **Total Actuarial Accrued Liability** | **$704,868** | **$676,412** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $704,868 | $704,868 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $704,868 | $676,412 |
| 2. Actuarial value of assets | 636,512 | 642,750 |
| 3. Unfunded accrued liability *(1. – 2.)* | 68,356 | 33,662 |
| 4. Funded percentage *(2. ÷ 1.)* | 90% | 95% |
| 5. Combined valuation payroll | $223,782 | $180,977 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 31% | 19% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($141,778) | ($11,683) | ($10,845) | ($140,940) | ($12,121) |
| December 31, 2009 | $190,179 | $14,528 | $14,596 | $190,247 | $15,073 |
| December 31, 2011 | N/A | N/A | N/A | $19,049 | $1,407 |
| **Total** | | | | **$68,356** | **$4,359** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $676,412 |
| b. Normal cost at December 31, 2010 | 9,028 |
| c. Benefit payments during 2011 | (39,054) |
| d. Interest at 8.0% to December 31, 2011 | 53,273 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 699,659 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 699,659 |
| 2. Actuarial accrued liability at December 31, 2011 | 704,868 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (5,209) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 642,750 |
| b. Contributions for 2011[1] | 6,050 |
| c. Benefit payments and expenses during 2011 | (39,312) |
| d. Interest at 8.0% to December 31, 2011 | 50,090 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 659,578 |
| 5. Actuarial value of assets at December 31, 2011 | 636,512 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (23,066) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($28,275)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$33,662** |
| 2. Expected increase | 6,419 |
| 3. Liability (gain)/loss | 5,209 |
| 4. Asset (gain)/loss | 23,066 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$68,356** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 10,123 | 96,031 | 10.54% | 9,028 | 93,258 | 9.68% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$10,123** | **$96,031** | **10.54%** | **$9,028** | **$93,258** | **9.68%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $68,356 | $33,662 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 4,359 | 1,757 |
| 3. Combined valuation payroll | 223,782 | 180,977 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 1.95% | 0.97% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.54% | 9.68% |
| b. Tier 1/Tier 2 UAL rate | 1.95% | 0.97% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 12.62% | 10.77% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 90% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 12.62% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.91%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 1.95% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.04% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.71% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.54% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.54% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.54% | 9.68% |
| b. Tier 1/Tier 2 UAL rate | 1.04% | 0.97% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 11.71% | 10.77% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $96,031 | $0 | $96,031 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 96,031 | 0 | 96,031 |
| OPSRP valuation payroll | 127,751 | 0 | 127,751 |
| **Combined valuation payroll** | **$223,782** | **$0** | **$223,782** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 3 | 4 | 1 | 0 | 2 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 3 | 4 | 1 | 0 | 2 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **4** | **0** | **3** | **7** | **4** | **0** | **2** | **6** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | 1 | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | **1** | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 2 | 1,347 |
| **65-69** | | |
| **70-74** | | |
| **75-79** | 1 | 413 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 3 | 1,035 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Jackson County Fire District #5/2556
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Jackson County Fire District #5/2556

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Jackson County Fire District #5 -- #2556

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Jackson County Fire District #5 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jackson County Fire District #5.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Jackson County Fire District #5*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 14.90% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.49% | 4.49% | 4.49% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **19.54%** | **10.91%** | **13.64%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **20.13%** | **11.40%** | **14.13%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 19.39% | 19.39% |
| Minimum July 1, 2015 Rate | 15.51% | 11.63% |
| Maximum July 1, 2015 Rate | 23.27% | 27.15% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 19.25% | 5.29% | 5.29% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 24.13% | 9.23% | 9.23% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $11,849,534 | $11,289,553 | ($559,981) | 105% | $1,411,360 | (40%) |
| 12/31/2007 | 12,955,591 | 12,046,398 | (909,193) | 108% | 1,403,147 | (65%) |
| 12/31/2008 | 9,985,499 | 12,541,487 | 2,555,988 | 80% | 1,804,189 | 142% |
| 12/31/2009 | 11,458,597 | 13,191,131 | 1,732,534 | 87% | 1,937,662 | 89% |
| 12/31/2010 | 12,338,988 | 14,587,295 | 2,248,307 | 85% | 2,158,071 | 104% |
| 12/31/2011 | 11,630,678 | 14,920,503 | 3,289,825 | 78% | 2,094,912 | 157% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Jackson County Fire District #5*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $3,289,825 | $2,248,307 |
| Allocated pooled OPSRP UAL | 35,744 | 26,795 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 3,325,569 | 2,275,102 |
| Combined valuation payroll | 2,094,912 | 2,158,071 |
| Net pension UAL as a percentage of payroll | 159% | 105% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $54,270 | $77,644 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $211,762 | $243,952 |
| Tier 1/Tier 2 valuation payroll | 1,421,481 | 1,672,490 |
| Tier 1/Tier 2 pension normal cost rate | 14.90% | 14.59% |
| Tier 1/ Tier 2 Actuarial accrued liability | $14,920,503 | $14,587,295 |
| Actuarial asset value | 11,630,678 | 12,338,988 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 3,289,825 | 2,248,307 |
| Tier 1/ Tier 2 Funded status | 78% | 85% |
| Combined valuation payroll | $2,094,912 | $2,158,071 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 157% | 104% |
| Tier 1/Tier 2 UAL rate | 4.49% | 4.17% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 16 | 20 |
| Tier 1/Tier 2 dormant members | 3 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 18 | 15 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 2,094,912 | 2,158,071 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,605,323 | $2,561,203 |
| 2. Employer reserves | 5,125,898 | 6,094,590 |
| 3. Benefits in force reserve | 4,899,457 | 3,683,195 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$11,630,678** | **$12,338,988** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $12,338,988 |
| 2. Regular employer contributions | 216,087 |
| 3. Benefit payments and expenses | (820,870) |
| 4. Adjustments[2] | (432,397) |
| 5. Interest credited | 328,870 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$11,630,678** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $111,352 | $147,563 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 93,853 | 89,977 |
| Tier 2 General Service | 6,557 | 6,412 |
| **Total** | **$211,762** | **$243,952** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $211,762 | $211,762 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $4,798,332 | $6,884,188 |
| ▪ Tier 1 General Service | 115 | 108 |
| ▪ Tier 2 Police & Fire | 820,518 | 818,827 |
| ▪ Tier 2 General Service | 95,815 | 86,557 |
| ▪ **Total Active Members** | **$5,714,780** | **$7,789,680** |
| Dormant Members | 294,903 | 733,042 |
| Retired Members and Beneficiaries | 8,910,820 | 6,064,573 |
| **Total Actuarial Accrued Liability** | **$14,920,503** | **$14,587,295** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $14,920,503 | $14,920,503 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $14,920,503 | $14,587,295 |
| 2. Actuarial value of assets | 11,630,678 | 12,338,988 |
| 3. Unfunded accrued liability *(1. – 2.)* | 3,289,825 | 2,248,307 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 85% |
| 5. Combined valuation payroll | $2,094,912 | $2,158,071 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 157% | 104% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,100,374) | ($90,683) | ($84,170) | ($1,093,861) | ($94,084) |
| December 31, 2009 | $2,844,300 | $217,274 | $218,295 | $2,845,321 | $225,422 |
| December 31, 2011 | N/A | N/A | N/A | $1,538,365 | $113,608 |
| **Total** | | | | **$3,289,825** | **$244,946** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $14,587,295 |
| b. Normal cost at December 31, 2010 | 243,952 |
| c. Benefit payments during 2011 | (815,490) |
| d. Interest at 8.0% to December 31, 2011 | 1,153,880 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 15,169,637 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 15,169,637 |
| 2. Actuarial accrued liability at December 31, 2011 | 14,920,503 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 249,134 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 12,338,988 |
| b. Contributions for 2011[1] | 216,087 |
| c. Benefit payments and expenses during 2011 | (820,870) |
| d. Interest at 8.0% to December 31, 2011 | 962,928 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 12,697,133 |
| 5. Actuarial value of assets at December 31, 2011 | 11,630,678 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,066,455) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($817,321)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,248,307** |
| 2. Expected increase | 224,197 |
| 3. Liability (gain)/loss | (249,134) |
| 4. Asset (gain)/loss | 1,066,455 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$3,289,825** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $111,352 | $739,674 | 15.05% | $147,563 | $996,936 | 14.80% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 93,853 | 626,101 | 14.99% | 89,977 | 619,326 | 14.53% |
| Tier 2 General Service | 6,557 | 55,706 | 11.77% | 6,412 | 56,228 | 11.40% |
| **Total** | **$211,762** | **$1,421,481** | **14.90%** | **$243,952** | **$1,672,490** | **14.59%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $3,289,825 | $2,248,307 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 244,946 | 163,839 |
| 3. Combined valuation payroll | 2,094,912 | 2,158,071 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 11.69% | 7.59% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.90% | 14.59% |
| b. Tier 1/Tier 2 UAL rate | 11.69% | 7.59% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 26.72% | 22.30% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 15.63% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.63% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.13% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.13% |
| c. Funded percentage | 78% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.76% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.87% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.39% |
| 7. July 1, 2013 total pension rate, before adjustment | 26.72% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (7.33%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 11.69% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.36% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 19.39% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 14.90% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.90% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 19.39% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.90% | 14.59% |
| b. Tier 1/Tier 2 UAL rate | 4.36% | 4.05% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 19.39% | 18.76% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $739,674 | $739,674 |
| Tier 2 | 55,706 | 626,101 | 681,807 |
| Tier 1/Tier 2 valuation payroll | 55,706 | 1,365,775 | 1,421,481 |
| OPSRP valuation payroll | 21,400 | 652,031 | 673,431 |
| **Combined valuation payroll** | **$77,106** | **$2,017,806** | **$2,094,912** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| Police & Fire | 8 | 7 | 9 | 24 | 11 | 8 | 6 | 25 |
| Total | 8 | 8 | 10 | 26 | 11 | 9 | 7 | 27 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 2 | 1 | N/A | 3 | 2 | 1 | N/A | 3 |
| Total | 3 | 1 | N/A | 4 | 3 | 1 | N/A | 4 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| Total | 2 | 1 | 0 | 3 | 2 | 0 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 15 | 2 | 0 | 17 | 14 | 0 | 0 | 14 |
| Total | 16 | 2 | 0 | 18 | 15 | 0 | 0 | 15 |
| **Grand Total Number of Members** | **29** | **12** | **10** | **51** | **31** | **10** | **7** | **48** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 2 | | | | | | | **2** |
| **40-44** | | 2 | 2 | | | | | | | **4** |
| **45-49** | | | 1 | | 1 | | | | | **2** |
| **50-54** | | | 1 | 2 | 1 | 1 | 1 | | | **6** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | 1 | | 1 | | | **2** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **2** | **6** | **2** | **3** | **1** | **2** | | | **16** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | 1 | 1,037 |
| **55-59** | | |
| **60-64** | 1 | 63 |
| **65-69** | | |
| **70-74** | 1 | 1,527 |
| **75+** | | |
| **Total** | 3 | 876 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 3 | 3,260 |
| **55-59** | 4 | 5,414 |
| **60-64** | 4 | 2,739 |
| **65-69** | 4 | 2,459 |
| **70-74** | 1 | 2,399 |
| **75-79** | 1 | 759 |
| **80-84** | | |
| **85-89** | 1 | 239 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 18 | 3,090 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Jefferson County Rural Fire Protection District #1/2575
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Jefferson County Rural Fire Protection District #1/2575

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Jefferson County Rural Fire Protection District #1/2575

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

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On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

# OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

## INDEPENDENT EMPLOYERS

## Jefferson County Rural Fire Protection District #1 -- #2575

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Jefferson County Rural Fire Protection District #1 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County Rural Fire Protection District #1.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Jefferson County Rural Fire Protection District #1*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.02% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.54% | 5.54% | 5.54% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **12.71%** | **11.96%** | **14.69%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.30%** | **12.45%** | **15.18%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 87%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.56% | 12.56% |
| Minimum July 1, 2015 Rate | 9.56% | 6.56% |
| Maximum July 1, 2015 Rate | 15.56% | 18.56% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 23 | 28 |
| Amortization factor | 14.880 | 16.604 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.31% | 3.84% | 3.84% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.56% | 5.54% | 5.54% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,623,885 | $1,328,855 | ($295,030) | 122% | $285,566 | (103%) |
| 12/31/2007 | 1,804,387 | 1,515,025 | (289,362) | 119% | 213,297 | (136%) |
| 12/31/2008 | 1,408,857 | 1,571,096 | 162,239 | 90% | 170,011 | 95% |
| 12/31/2009 | 1,549,973 | 1,693,055 | 143,082 | 92% | 229,869 | 62% |
| 12/31/2010 | 1,682,599 | 1,644,460 | (38,139) | 102% | 256,314 | (15%) |
| 12/31/2011 | 1,590,509 | 1,837,042 | 246,533 | 87% | 304,654 | 81% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Jefferson County Rural Fire Protection District #1*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $246,533 | ($38,139) |
| Allocated pooled OPSRP UAL | 5,198 | 3,182 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 251,731 | (34,957) |
| Combined valuation payroll | 304,654 | 256,314 |
| Net pension UAL as a percentage of payroll | 83% | (14%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $7,892 | $9,222 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $6,606 | $6,225 |
| Tier 1/Tier 2 valuation payroll | 94,115 | 91,724 |
| Tier 1/Tier 2 pension normal cost rate | 7.02% | 6.79% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,837,042 | $1,644,460 |
| Actuarial asset value | 1,590,509 | 1,682,599 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 246,533 | (38,139) |
| Tier 1/ Tier 2 Funded status | 87% | 102% |
| Combined valuation payroll | $304,654 | $256,314 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 81% | (15%) |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 5.54% | 0.52% |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 304,654 | 256,314 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $145,293 | $279,839 |
| 2. Employer reserves | 669,267 | 843,592 |
| 3. Benefits in force reserve | 775,949 | 559,168 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,590,509** | **$1,682,599** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,682,599 |
| 2. | Regular employer contributions | 20,727 |
| 3. | Benefit payments and expenses | (130,005) |
| 4. | Adjustments [2] | (35,123) |
| 5. | Interest credited | 52,311 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,590,509** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 6,606 | 6,225 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$6,606** | **$6,225** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $6,606 | $6,606 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $110,586 | $434,709 |
| ▪ Tier 1 General Service | 145,701 | 135,223 |
| ▪ Tier 2 Police & Fire | 50,339 | 41,086 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$306,626** | **$611,018** |
| Dormant Members | 119,170 | 112,744 |
| Retired Members and Beneficiaries | 1,411,246 | 920,698 |
| **Total Actuarial Accrued Liability** | **$1,837,042** | **$1,644,460** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,837,042 | $1,837,042 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,837,042 | $1,644,460 |
| 2. Actuarial value of assets | 1,590,509 | 1,682,599 |
| 3. Unfunded accrued liability *(1. – 2.)* | 246,533 | (38,139) |
| 4. Funded percentage *(2. ÷ 1.)* | 87% | 102% |
| 5. Combined valuation payroll | $304,654 | $256,314 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 81% | (15%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($372,028) | ($30,660) | ($28,457) | ($369,825) | ($31,810) |
| December 31, 2009 | $517,632 | $39,541 | $39,727 | $517,818 | $41,024 |
| December 31, 2011 | N/A | N/A | N/A | $98,540 | $7,277 |
| **Total** | | | | **$246,533** | **$16,491** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,644,460 |
| b. Normal cost at December 31, 2010 | 6,225 |
| c. Benefit payments during 2011 | (129,153) |
| d. Interest at 8.0% to December 31, 2011 | 126,889 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,648,421 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,648,421 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,837,042 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (188,621) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,682,599 |
| b. Contributions for 2011[1] | 20,727 |
| c. Benefit payments and expenses during 2011 | (130,005) |
| d. Interest at 8.0% to December 31, 2011 | 130,237 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,703,558 |
| 5. Actuarial value of assets at December 31, 2011 | 1,590,509 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (113,049) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($301,670)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($38,139)** |
| 2. Expected increase | (16,998) |
| 3. Liability (gain)/loss | 188,621 |
| 4. Asset (gain)/loss | 113,049 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$246,533** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 36,211 | 0.00% | 0 | 35,167 | 0.00% |
| Tier 2 Police & Fire | 6,606 | 57,904 | 11.41% | 6,225 | 56,557 | 11.01% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$6,606** | **$94,115** | **7.02%** | **$6,225** | **$91,724** | **6.79%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $246,533 | ($38,139) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 16,491 | (4,688) |
| 3. Combined valuation payroll | 304,654 | 256,314 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 5.41% | (1.83%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.02% | 6.79% |
| b. Tier 1/Tier 2 UAL rate | 5.41% | (1.83%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 12.56% | 5.08% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.31% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.31% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.06% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 87% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.31% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.31% |
| 7. July 1, 2013 total pension rate, before adjustment | 12.56% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 5.41% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.41% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.56% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.02% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.02% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.56% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.02% | 6.79% |
| b. Tier 1/Tier 2 UAL rate | 5.41% | 0.40% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 12.56% | 7.31% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $36,211 | $0 | $36,211 |
| Tier 2 | 0 | 57,904 | 57,904 |
| Tier 1/Tier 2 valuation payroll | 36,211 | 57,904 | 94,115 |
| OPSRP valuation payroll | 0 | 210,539 | 210,539 |
| **Combined valuation payroll** | **$36,211** | **$268,443** | **$304,654** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 1 | 3 | 4 | 0 | 1 | 2 | 3 |
| Total | 1 | 1 | 3 | 5 | 1 | 1 | 2 | 4 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 1 | 0 | N/A | 1 | 2 | 0 | N/A | 2 |
| Total | 1 | 0 | N/A | 1 | 2 | 0 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Police & Fire | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 5 | 0 | 0 | 5 | 3 | 0 | 0 | 3 |
| Total | 5 | 0 | 0 | 5 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **8** | **1** | **3** | **12** | **7** | **1** | **2** | **10** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | 1 | | | | | **1** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | | | **1** | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | 2,165 |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 2,165 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 2,599 |
| **55-59** | 3 | 1,677 |
| **60-64** | 1 | 148 |
| **65-69** | | |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 5 | 1,556 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Jefferson County Soil & Water Conservation District/2841
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Jefferson County Soil & Water Conservation District/2841

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Jefferson County Soil & Water Conservation District -- #2841

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Jefferson County Soil & Water Conservation District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County Soil & Water Conservation District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Jefferson County Soil & Water Conservation District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 6.87% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.43%) | (0.43%) | (0.43%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **6.59%** | **5.99%** | **8.72%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **7.18%** | **6.48%** | **9.21%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 101%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 6.44% | 6.44% |
| Minimum July 1, 2015 Rate | 3.44% | 0.44% |
| Maximum July 1, 2015 Rate | 9.44% | 12.44% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 17 |
| Amortization factor | 17.175 | 11.913 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.88% | (2.32%) | (2.32%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.90% | 0.03% | 0.03% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $129,765 | $76,691 | ($53,074) | 169% | $136,444 | (39%) |
| 12/31/2007 | 150,552 | 86,460 | (64,092) | 174% | 140,543 | (46%) |
| 12/31/2008 | 112,885 | 91,646 | (21,239) | 123% | 137,000 | (16%) |
| 12/31/2009 | 140,414 | 101,931 | (38,483) | 138% | 132,003 | (29%) |
| 12/31/2010 | 134,596 | 126,517 | (8,079) | 106% | 115,888 | (7%) |
| 12/31/2011 | 132,805 | 131,462 | (1,343) | 101% | 140,343 | (1%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Jefferson County Soil & Water Conservation District*

| | **Actuarial Valuation as of** | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($1,343) | ($8,079) |
| Allocated pooled OPSRP UAL | 2,395 | 1,439 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,052 | (6,640) |
| Combined valuation payroll | 140,343 | 115,888 |
| Net pension UAL as a percentage of payroll | 1% | (6%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,636 | $4,169 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $3,784 | $3,349 |
| Tier 1/Tier 2 valuation payroll | 55,067 | 54,749 |
| Tier 1/Tier 2 pension normal cost rate | 6.87% | 6.19% |
| Tier 1/ Tier 2 Actuarial accrued liability | $131,462 | $126,517 |
| Actuarial asset value | 132,805 | 134,596 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (1,343) | (8,079) |
| Tier 1/ Tier 2 Funded status | 101% | 106% |
| Combined valuation payroll | $140,343 | $115,888 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (1%) | (7%) |
| Tier 1/Tier 2 UAL rate | (0.43%) | (0.85%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 140,343 | 115,888 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $13,240 | $13,264 |
| 2. Employer reserves | 77,134 | 74,318 |
| 3. Benefits in force reserve | 42,431 | 47,014 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$132,805** | **$134,596** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $134,596 |
| 2. | Regular employer contributions | 1,305 |
| 3. | Benefit payments and expenses | (7,109) |
| 4. | Adjustments[2] | 1,649 |
| 5. | Interest credited | 2,364 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$132,805** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 3,784 | 3,349 |
| **Total** | **$3,784** | **$3,349** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $3,784 | $3,784 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 54,292 | 49,107 |
| ▪ **Total Active Members** | **$54,292** | **$49,107** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 77,170 | 77,410 |
| **Total Actuarial Accrued Liability** | **$131,462** | **$126,517** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $131,462 | $131,462 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $131,462 | $126,517 |
| 2. Actuarial value of assets | 132,805 | 134,596 |
| 3. Unfunded accrued liability *(1. – 2.)* | (1,343) | (8,079) |
| 4. Funded percentage *(2. ÷ 1.)* | 101% | 106% |
| 5. Combined valuation payroll | $140,343 | $115,888 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (1%) | (7%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($70,850) | ($5,838) | ($5,419) | ($70,431) | ($6,057) |
| December 31, 2009 | $32,649 | $2,494 | $2,506 | $32,661 | $2,588 |
| December 31, 2011 | N/A | N/A | N/A | $36,427 | $2,690 |
| **Total** | | | | **($1,343)** | **($779)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $126,517 |
| b. Normal cost at December 31, 2010 | 3,349 |
| c. Benefit payments during 2011 | (7,062) |
| d. Interest at 8.0% to December 31, 2011 | 10,107 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 132,911 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 132,911 |
| 2. Actuarial accrued liability at December 31, 2011 | 131,462 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 1,449 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 134,596 |
| b. Contributions for 2011[1] | 1,305 |
| c. Benefit payments and expenses during 2011 | (7,109) |
| d. Interest at 8.0% to December 31, 2011 | 10,536 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 139,327 |
| 5. Actuarial value of assets at December 31, 2011 | 132,805 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (6,522) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($5,073)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($8,079)** |
| 2. Expected increase | 1,663 |
| 3. Liability (gain)/loss | (1,449) |
| 4. Asset (gain)/loss | 6,522 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($1,343)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 3,784 | 55,067 | 6.87% | 3,349 | 54,749 | 6.12% |
| **Total** | **$3,784** | **$55,067** | **6.87%** | **$3,349** | **$54,749** | **6.12%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($1,343) | ($8,079) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (779) | (1,119) |
| 3. Combined valuation payroll | 140,343 | 115,888 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (0.56%) | (0.97%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.87% | 6.12% |
| b. Tier 1/Tier 2 UAL rate | (0.56%) | (0.97%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 6.44% | 5.27% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.88% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.88% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.18% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 101% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.88% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.88% |
| 7. | July 1, 2013 total pension rate, before adjustment | 6.44% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (0.56%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.56%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 6.44% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 6.87% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 6.87% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 6.44% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.87% | 6.19% |
| b. Tier 1/Tier 2 UAL rate | (0.56%) | (0.97%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 6.44% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 55,067 | 0 | 55,067 |
| Tier 1/Tier 2 valuation payroll | 55,067 | 0 | 55,067 |
| OPSRP valuation payroll | 85,276 | 0 | 85,276 |
| **Combined valuation payroll** | **$140,343** | **$0** | **$140,343** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 2 | 3 | 0 | 1 | 2 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 2 | 3 | 0 | 1 | 2 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| **Grand Total Number of Members** | **0** | **2** | **2** | **4** | **0** | **2** | **2** | **4** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 1 | | | | | | | **1** |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | 1 | 589 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 1 | 589 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Jefferson County/2006
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Jefferson County/2006

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Jefferson County/2006

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Jefferson County -- #2006

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Jefferson County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Jefferson County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Jefferson County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.95% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.12% | 4.12% | 4.12% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **15.22%** | **10.54%** | **13.27%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.81%** | **11.03%** | **13.76%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 83%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 15.07% | 15.07% |
| Minimum July 1, 2015 Rate | 12.06% | 9.05% |
| Maximum July 1, 2015 Rate | 18.08% | 21.09% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.80% | 3.28% | 3.28% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.98% | 5.03% | 5.03% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $26,244,000 | $24,383,625 | ($1,860,374) | 108% | $6,064,933 | (31%) |
| 12/31/2007 | 27,819,143 | 25,351,071 | (2,468,072) | 110% | 6,548,918 | (38%) |
| 12/31/2008 | 21,467,039 | 26,384,656 | 4,917,617 | 81% | 6,156,067 | 80% |
| 12/31/2009 | 24,737,248 | 28,038,860 | 3,301,612 | 88% | 6,027,492 | 55% |
| 12/31/2010 | 26,047,852 | 28,853,513 | 2,805,661 | 90% | 5,776,442 | 49% |
| 12/31/2011 | 25,322,119 | 30,409,250 | 5,087,131 | 83% | 5,991,100 | 85% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Jefferson County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $5,087,131 | $2,805,661 |
| Allocated pooled OPSRP UAL | 102,222 | 71,722 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 5,189,353 | 2,877,383 |
| Combined valuation payroll | 5,991,100 | 5,776,442 |
| Net pension UAL as a percentage of payroll | 87% | 50% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $155,202 | $207,827 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $295,521 | $285,191 |
| Tier 1/Tier 2 valuation payroll | 2,697,742 | 2,840,784 |
| Tier 1/Tier 2 pension normal cost rate | 10.95% | 10.04% |
| Tier 1/ Tier 2 Actuarial accrued liability | $30,409,250 | $28,853,513 |
| Actuarial asset value | 25,322,119 | 26,047,852 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 5,087,131 | 2,805,661 |
| Tier 1/ Tier 2 Funded status | 83% | 90% |
| Combined valuation payroll | $5,991,100 | $5,776,442 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 85% | 49% |
| Tier 1/Tier 2 UAL rate | 4.12% | 3.53% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 56 | 61 |
| Tier 1/Tier 2 dormant members | 84 | 89 |
| Tier 1/Tier 2 retirees and beneficiaries | 160 | 138 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 5,991,100 | 5,776,442 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $4,809,271 | $5,596,594 |
| 2. Employer reserves | 12,044,975 | 13,064,245 |
| 3. Benefits in force reserve | 8,467,873 | 7,387,013 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$25,322,119** | **$26,047,852** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $26,047,852 |
| 2. Regular employer contributions | 337,114 |
| 3. Benefit payments and expenses | (1,418,734) |
| 4. Adjustments[2] | (439,204) |
| 5. Interest credited | 795,091 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$25,322,119** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $40,426 | $49,098 |
| Tier 1 General Service | 64,031 | 58,444 |
| Tier 2 Police & Fire | 66,090 | 57,384 |
| Tier 2 General Service | 124,974 | 120,265 |
| **Total** | **$295,521** | **$285,191** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $295,521 | $295,521 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $1,368,745 | $1,575,537 |
| ▪ Tier 1 General Service | 6,626,300 | 7,551,398 |
| ▪ Tier 2 Police & Fire | 1,093,557 | 906,360 |
| ▪ Tier 2 General Service | 2,255,767 | 2,300,199 |
| ▪ **Total Active Members** | **$11,344,369** | **$12,333,494** |
| Dormant Members | 3,664,054 | 4,356,915 |
| Retired Members and Beneficiaries | 15,400,827 | 12,163,104 |
| **Total Actuarial Accrued Liability** | **$30,409,250** | **$28,853,513** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $30,409,250 | $30,409,250 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $30,409,250 | $28,853,513 |
| 2. Actuarial value of assets | 25,322,119 | 26,047,852 |
| 3. Unfunded accrued liability *(1. – 2.)* | 5,087,131 | 2,805,661 |
| 4. Funded percentage *(2. ÷ 1.)* | 83% | 90% |
| 5. Combined valuation payroll | $5,991,100 | $5,776,442 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 85% | 49% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($3,065,392) | ($252,622) | ($234,478) | ($3,047,248) | ($262,095) |
| December 31, 2009 | $6,394,156 | $488,447 | $490,740 | $6,396,449 | $506,764 |
| December 31, 2011 | N/A | N/A | N/A | $1,737,930 | $128,346 |
| **Total** | | | | **$5,087,131** | **$373,015** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $28,853,513 |
| b. Normal cost at December 31, 2010 | 285,191 |
| c. Benefit payments during 2011 | (1,409,435) |
| d. Interest at 8.0% to December 31, 2011 | 2,274,719 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 30,003,988 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 30,003,988 |
| 2. Actuarial accrued liability at December 31, 2011 | 30,409,250 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (405,262) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 26,047,852 |
| b. Contributions for 2011[1] | 337,114 |
| c. Benefit payments and expenses during 2011 | (1,418,734) |
| d. Interest at 8.0% to December 31, 2011 | 2,040,563 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 27,006,796 |
| 5. Actuarial value of assets at December 31, 2011 | 25,322,119 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,684,677) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($2,089,939)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,805,661** |
| 2. Expected increase | 191,531 |
| 3. Liability (gain)/loss | 405,262 |
| 4. Asset (gain)/loss | 1,684,677 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$5,087,131** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $40,426 | $319,143 | 12.67% | $49,098 | $314,294 | 15.62% |
| Tier 1 General Service | 64,031 | 841,727 | 7.61% | 58,444 | 1,026,265 | 5.69% |
| Tier 2 Police & Fire | 66,090 | 430,898 | 15.34% | 57,384 | 387,419 | 14.81% |
| Tier 2 General Service | 124,974 | 1,105,974 | 11.30% | 120,265 | 1,112,806 | 10.81% |
| **Total** | **$295,521** | **$2,697,742** | **10.95%** | **$285,191** | **$2,840,784** | **10.04%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $5,087,131 | $2,805,661 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 373,015 | 197,194 |
| 3. Combined valuation payroll | 5,991,100 | 5,776,442 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 6.23% | 3.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.95% | 10.04% |
| b. Tier 1/Tier 2 UAL rate | 6.23% | 3.41% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.31% | 13.57% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 12.07% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 12.07% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.41% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 83% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 9.07% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 15.07% |
| 7. | July 1, 2013 total pension rate, before adjustment | 17.31% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.24%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 6.23% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.99% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 15.07% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.95% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.95% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 15.07% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.95% | 10.04% |
| b. Tier 1/Tier 2 UAL rate | 3.99% | 3.41% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 15.07% | 13.57% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $841,727 | $319,143 | $1,160,870 |
| Tier 2 | 1,105,974 | 430,898 | 1,536,872 |
| Tier 1/Tier 2 valuation payroll | 1,947,701 | 750,041 | 2,697,742 |
| OPSRP valuation payroll | 2,291,731 | 1,001,627 | 3,293,358 |
| **Combined valuation payroll** | **$4,239,432** | **$1,751,668** | **$5,991,100** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 17 | 26 | 52 | 95 | 22 | 26 | 52 | 100 |
| Police & Fire | 6 | 7 | 26 | 39 | 6 | 7 | 26 | 39 |
| Total | 23 | 33 | 78 | 134 | 28 | 33 | 78 | 139 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 40 | 32 | N/A | 72 | 48 | 42 | N/A | 90 |
| Police & Fire | 9 | 16 | N/A | 25 | 9 | 15 | N/A | 24 |
| Total | 49 | 48 | N/A | 97 | 57 | 57 | N/A | 114 |
| **Dormant Members** | | | | | | | | |
| General Service | 35 | 40 | 3 | 78 | 38 | 41 | 3 | 82 |
| Police & Fire | 5 | 4 | 0 | 9 | 8 | 2 | 0 | 10 |
| Total | 40 | 44 | 3 | 87 | 46 | 43 | 3 | 92 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 106 | 17 | 0 | 123 | 91 | 13 | 0 | 104 |
| Police & Fire | 33 | 4 | 0 | 37 | 32 | 2 | 0 | 34 |
| Total | 139 | 21 | 0 | 160 | 123 | 15 | 0 | 138 |
| **Grand Total Number of Members** | **251** | **146** | **81** | **478** | **254** | **148** | **81** | **483** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | 1 | 5 | | | | | | | 6 |
| 40-44 | | 1 | 4 | 3 | | | | | | 8 |
| 45-49 | | 2 | 2 | | 1 | 2 | | | | 7 |
| 50-54 | | 2 | 4 | 3 | 1 | 2 | 2 | | | 14 |
| 55-59 | | 1 | 4 | 2 | 2 | 1 | | | | 10 |
| 60-64 | | | 3 | 3 | | 1 | | | | 7 |
| 65-69 | 1 | | 1 | 1 | | | | | | 3 |
| 70-74 | | | 1 | | | | | | | 1 |
| 75+ | | | | | | | | | | |
| **Total** | **1** | **7** | **24** | **12** | **4** | **6** | **2** | | | **56** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 2 | 572 |
| 35-39 | 3 | 327 |
| 40-44 | 9 | 458 |
| 45-49 | 17 | 901 |
| 50-54 | 11 | 578 |
| 55-59 | 16 | 301 |
| 60-64 | 15 | 450 |
| 65-69 | 7 | 271 |
| 70-74 | | |
| 75+ | 4 | 99 |
| **Total** | 84 | 497 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 1 | 105 |
| 45-49 | 3 | 125 |
| 50-54 | 4 | 875 |
| 55-59 | 16 | 945 |
| 60-64 | 38 | 845 |
| 65-69 | 28 | 676 |
| 70-74 | 25 | 379 |
| 75-79 | 23 | 806 |
| 80-84 | 12 | 415 |
| 85-89 | 7 | 603 |
| 90-94 | 3 | 159 |
| 95-99 | | |
| 100+ | | |
| **Total** | 160 | 674 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Keno Rural Fire Protection District/2646
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Keno Rural Fire Protection District/2646

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Keno Rural Fire Protection District/2646

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Keno Rural Fire Protection District -- #2646

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Keno Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Keno Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Keno Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 17.57% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 3.91% | 3.91% | 3.91% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **21.63%** | **10.33%** | **13.06%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **22.22%** | **10.82%** | **13.55%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 89%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 21.48% | 21.48% |
| Minimum July 1, 2015 Rate | 17.18% | 12.88% |
| Maximum July 1, 2015 Rate | 25.78% | 30.08% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 25 | 30 |
| Amortization factor | 15.542 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 20.61% | 3.20% | 3.20% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 21.48% | 3.91% | 3.91% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $500,840 | $491,454 | ($9,386) | 102% | $116,508 | (8%) |
| 12/31/2007 | 558,396 | 534,189 | (24,207) | 105% | 122,498 | (20%) |
| 12/31/2008 | 439,513 | 683,188 | 243,675 | 64% | 136,382 | 179% |
| 12/31/2009 | 536,346 | 605,171 | 68,825 | 89% | 128,941 | 53% |
| 12/31/2010 | 614,060 | 632,015 | 17,955 | 97% | 117,841 | 15% |
| 12/31/2011 | 648,686 | 725,949 | 77,263 | 89% | 130,385 | 59% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Keno Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $77,263 | $17,955 |
| Allocated pooled OPSRP UAL | 2,225 | 1,463 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 79,488 | 19,418 |
| Combined valuation payroll | 130,385 | 117,841 |
| Net pension UAL as a percentage of payroll | 61% | 16% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,378 | $4,240 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $22,910 | $20,781 |
| Tier 1/Tier 2 valuation payroll | 130,385 | 117,841 |
| Tier 1/Tier 2 pension normal cost rate | 17.57% | 17.63% |
| Tier 1/ Tier 2 Actuarial accrued liability | $725,949 | $632,015 |
| Actuarial asset value | 648,686 | 614,060 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 77,263 | 17,955 |
| Tier 1/ Tier 2 Funded status | 89% | 97% |
| Combined valuation payroll | $130,385 | $117,841 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 59% | 15% |
| Tier 1/Tier 2 UAL rate | 3.91% | 1.32% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 130,385 | 117,841 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $155,319 | $151,472 |
| 2. Employer reserves | 491,357 | 460,358 |
| 3. Benefits in force reserve | 2,010 | 2,230 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$648,686** | **$614,060** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $614,060 |
| 2. Regular employer contributions | 20,300 |
| 3. Benefit payments and expenses | (337) |
| 4. Adjustments[2] | (1,700) |
| 5. Interest credited | 16,362 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$648,686** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $18,222 | $16,124 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 4,688 | 4,657 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$22,910** | **$20,781** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $22,910 | $22,910 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $651,899 | $566,396 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 70,270 | 61,811 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$722,169** | **$628,207** |
| Dormant Members | 125 | 135 |
| Retired Members and Beneficiaries | 3,655 | 3,673 |
| **Total Actuarial Accrued Liability** | **$725,949** | **$632,015** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $725,949 | $725,949 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $725,949 | $632,015 |
| 2. Actuarial value of assets | 648,686 | 614,060 |
| 3. Unfunded accrued liability *(1. – 2.)* | 77,263 | 17,955 |
| 4. Funded percentage *(2. ÷ 1.)* | 89% | 97% |
| 5. Combined valuation payroll | $130,385 | $117,841 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 59% | 15% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($13,899) | ($1,145) | ($1,063) | ($13,817) | ($1,188) |
| December 31, 2009 | $83,009 | $6,341 | $6,371 | $83,039 | $6,579 |
| December 31, 2011 | N/A | N/A | N/A | $8,041 | $594 |
| **Total** | | | | **$77,263** | **$5,985** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $632,015 |
| b. Normal cost at December 31, 2010 | 20,781 |
| c. Benefit payments during 2011 | (334) |
| d. Interest at 8.0% to December 31, 2011 | 52,210 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 704,672 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 704,672 |
| 2. Actuarial accrued liability at December 31, 2011 | 725,949 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (21,277) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 614,060 |
| b. Contributions for 2011[1] | 20,300 |
| c. Benefit payments and expenses during 2011 | (337) |
| d. Interest at 8.0% to December 31, 2011 | 49,923 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 683,947 |
| 5. Actuarial value of assets at December 31, 2011 | 648,686 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (35,261) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($56,538)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$17,955** |
| 2. Expected increase | 2,770 |
| 3. Liability (gain)/loss | 21,277 |
| 4. Asset (gain)/loss | 35,261 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$77,263** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $18,222 | $107,339 | 16.98% | $16,124 | $94,703 | 17.03% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 4,688 | 23,046 | 20.34% | 4,657 | 23,138 | 20.13% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$22,910** | **$130,385** | **17.57%** | **$20,781** | **$117,841** | **17.63%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $77,263 | $17,955 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 5,985 | 1,418 |
| 3. Combined valuation payroll | 130,385 | 117,841 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.59% | 1.20% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 17.57% | 17.63% |
| b. Tier 1/Tier 2 UAL rate | 4.59% | 1.20% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 22.29% | 18.95% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 17.90% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 17.90% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.58% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.58% |
| c. Funded percentage | 89% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.58% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 14.32% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 21.48% |
| 7. July 1, 2013 total pension rate, before adjustment | 22.29% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.81%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.59% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.78% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 21.48% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 17.57% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 17.57% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 21.48% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 17.57% | 17.63% |
| b. Tier 1/Tier 2 UAL rate | 3.78% | 1.20% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 21.48% | 18.95% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $107,339 | $107,339 |
| Tier 2 | 0 | 23,046 | 23,046 |
| Tier 1/Tier 2 valuation payroll | 0 | 130,385 | 130,385 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$0** | **$130,385** | **$130,385** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 2 | 5 | N/A | 7 | 2 | 5 | N/A | 7 |
| Total | 2 | 5 | N/A | 7 | 2 | 5 | N/A | 7 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **5** | **5** | **0** | **10** | **5** | **5** | **0** | **10** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | 1 | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | | | **1** | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | 2 |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 2 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | 1 | 23 |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 1 | 23 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Klamath County Fire District #1/2515
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Klamath County Fire District #1/2515

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Klamath County Fire District #1 -- #2515

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Klamath County Fire District #1 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Klamath County Fire District #1.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Klamath County Fire District #1*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 16.38% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.77% | 5.77% | 5.77% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **22.30%** | **12.19%** | **14.92%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **22.89%** | **12.68%** | **15.41%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 76%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 22.15% | 22.15% |
| Minimum July 1, 2015 Rate | 17.72% | 13.29% |
| Maximum July 1, 2015 Rate | 26.58% | 31.01% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 23.77% | 7.13% | 7.13% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 25.95% | 9.57% | 9.57% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $27,490,773 | $27,593,787 | $103,014 | 100% | $5,113,968 | 2% |
| 12/31/2007 | 29,559,611 | 28,714,199 | (845,412) | 103% | 5,538,019 | (15%) |
| 12/31/2008 | 23,454,496 | 30,574,334 | 7,119,838 | 77% | 5,670,098 | 126% |
| 12/31/2009 | 26,521,815 | 33,357,196 | 6,835,381 | 80% | 5,647,736 | 121% |
| 12/31/2010 | 28,009,421 | 33,417,879 | 5,408,458 | 84% | 5,205,087 | 104% |
| 12/31/2011 | 27,401,974 | 35,883,765 | 8,481,791 | 76% | 5,209,949 | 163% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Klamath County Fire District #1*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $8,481,791 | $5,408,458 |
| Allocated pooled OPSRP UAL | 88,894 | 64,628 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 8,570,685 | 5,473,086 |
| Combined valuation payroll | 5,209,949 | 5,205,087 |
| Net pension UAL as a percentage of payroll | 165% | 105% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $134,966 | $187,271 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $525,161 | $529,613 |
| Tier 1/Tier 2 valuation payroll | 3,206,251 | 3,564,808 |
| Tier 1/Tier 2 pension normal cost rate | 16.38% | 14.86% |
| Tier 1/ Tier 2 Actuarial accrued liability | $35,883,765 | $33,417,879 |
| Actuarial asset value | 27,401,974 | 28,009,421 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 8,481,791 | 5,408,458 |
| Tier 1/ Tier 2 Funded status | 76% | 84% |
| Combined valuation payroll | $5,209,949 | $5,205,087 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 163% | 104% |
| Tier 1/Tier 2 UAL rate | 5.77% | 5.91% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 36 | 42 |
| Tier 1/Tier 2 dormant members | 7 | 7 |
| Tier 1/Tier 2 retirees and beneficiaries | 64 | 58 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 5,209,949 | 5,205,087 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $3,641,049 | $3,844,715 |
| 2. Employer reserves | 12,021,443 | 12,792,310 |
| 3. Benefits in force reserve | 11,739,481 | 11,372,396 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$27,401,974** | **$28,009,421** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $28,009,421 |
| 2. | Regular employer contributions | 556,808 |
| 3. | Benefit payments and expenses | (1,966,869) |
| 4. | Adjustments[2] | 45,923 |
| 5. | Interest credited | 756,691 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$27,401,974** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $297,988 | $315,384 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 217,967 | 205,621 |
| Tier 2 General Service | 9,206 | 8,608 |
| **Total** | **$525,161** | **$529,613** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $525,161 | $525,161 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $9,925,040 | $10,994,329 |
| ▪ Tier 1 General Service | 0 | 78,985 |
| ▪ Tier 2 Police & Fire | 3,013,057 | 2,572,614 |
| ▪ Tier 2 General Service | 81,560 | 69,384 |
| ▪ **Total Active Members** | **$13,019,657** | **$13,715,312** |
| Dormant Members | 1,513,089 | 977,322 |
| Retired Members and Beneficiaries | 21,351,019 | 18,725,245 |
| **Total Actuarial Accrued Liability** | **$35,883,765** | **$33,417,879** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $35,883,765 | $35,883,765 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $35,883,765 | $33,417,879 |
| 2. Actuarial value of assets | 27,401,974 | 28,009,421 |
| 3. Unfunded accrued liability *(1. – 2.)* | 8,481,791 | 5,408,458 |
| 4. Funded percentage *(2. ÷ 1.)* | 76% | 84% |
| 5. Combined valuation payroll | $5,209,949 | $5,205,087 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 163% | 104% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($884,648) | ($72,905) | ($67,668) | ($879,411) | ($75,639) |
| December 31, 2009 | $7,745,551 | $591,679 | $594,457 | $7,748,329 | $613,867 |
| December 31, 2011 | N/A | N/A | N/A | $1,612,873 | $119,110 |
| **Total** | | | | **$8,481,791** | **$657,338** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $33,417,879 |
| b. Normal cost at December 31, 2010 | 529,613 |
| c. Benefit payments during 2011 | (1,953,977) |
| d. Interest at 8.0% to December 31, 2011 | 2,637,640 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 34,631,155 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 34,631,155 |
| 2. Actuarial accrued liability at December 31, 2011 | 35,883,765 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (1,252,610) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 28,009,421 |
| b. Contributions for 2011[1] | 556,808 |
| c. Benefit payments and expenses during 2011 | (1,966,869) |
| d. Interest at 8.0% to December 31, 2011 | 2,184,351 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 28,783,711 |
| 5. Actuarial value of assets at December 31, 2011 | 27,401,974 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,381,737) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($2,634,347)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$5,408,458** |
| 2. Expected increase | 438,986 |
| 3. Liability (gain)/loss | 1,252,610 |
| 4. Asset (gain)/loss | 1,381,737 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$8,481,791** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $297,988 | $1,787,127 | 16.67% | $315,384 | $2,126,878 | 14.83% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 217,967 | 1,302,345 | 16.74% | 205,621 | 1,323,502 | 15.54% |
| Tier 2 General Service | 9,206 | 116,779 | 7.88% | 8,608 | 114,428 | 7.52% |
| **Total** | **$525,161** | **$3,206,251** | **16.38%** | **$529,613** | **$3,564,808** | **14.86%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $8,481,791 | $5,408,458 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 657,338 | 411,511 |
| 3. Combined valuation payroll | 5,209,949 | 5,205,087 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 12.62% | 7.91% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.38% | 14.86% |
| b. Tier 1/Tier 2 UAL rate | 12.62% | 7.91% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 29.13% | 22.89% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 17.31% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 17.31% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 3.46% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.46% |
| | c. Funded percentage | 76% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.84% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 12.47% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 22.15% |
| 7. | July 1, 2013 total pension rate, before adjustment | 29.13% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (6.98%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 12.62% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.64% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 22.15% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 16.38% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 16.38% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 22.15% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.38% | 14.86% |
| b. Tier 1/Tier 2 UAL rate | 5.64% | 5.79% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 22.15% | 20.77% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $1,787,127 | $1,787,127 |
| Tier 2 | 116,779 | 1,302,345 | 1,419,124 |
| Tier 1/Tier 2 valuation payroll | 116,779 | 3,089,472 | 3,206,251 |
| OPSRP valuation payroll | 77,820 | 1,925,878 | 2,003,698 |
| **Combined valuation payroll** | **$194,599** | **$5,015,350** | **$5,209,949** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 2 | 2 | 4 | 0 | 2 | 2 | 4 |
| Police & Fire | 19 | 15 | 24 | 58 | 24 | 16 | 23 | 63 |
| Total | 19 | 17 | 26 | 62 | 24 | 18 | 25 | 67 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 1 | 1 | N/A | 2 |
| Police & Fire | 3 | 11 | N/A | 14 | 3 | 9 | N/A | 12 |
| Total | 3 | 11 | N/A | 14 | 4 | 10 | N/A | 14 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| Police & Fire | 4 | 2 | 0 | 6 | 3 | 3 | 0 | 6 |
| Total | 4 | 3 | 1 | 8 | 3 | 4 | 1 | 8 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 6 | 0 | 0 | 6 | 4 | 1 | 0 | 5 |
| Police & Fire | 53 | 5 | 0 | 58 | 52 | 1 | 0 | 53 |
| Total | 59 | 5 | 0 | 64 | 56 | 2 | 0 | 58 |
| **Grand Total Number of Members** | **85** | **36** | **27** | **148** | **87** | **34** | **26** | **147** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | 1 | | | | | | | **1** |
| **35-39** | | 2 | 3 | 1 | | | | | | **6** |
| **40-44** | | 1 | 3 | 2 | | | | | | **6** |
| **45-49** | | | 2 | 1 | 6 | | | | | **9** |
| **50-54** | | | 2 | | 2 | 2 | 2 | | | **8** |
| **55-59** | | | 2 | | | 1 | 1 | | | **4** |
| **60-64** | | | 1 | | 1 | | | | | **2** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **3** | **14** | **4** | **9** | **3** | **3** | | | **36** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| **Age** | **Count** | **Average Deferred Monthly Benefit** |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 2 | 1,527 |
| **45-49** | 1 | 3,446 |
| **50-54** | 1 | 1,259 |
| **55-59** | 3 | 1,765 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 7 | 1,865 |

**Retired Members and Beneficiaries**

| **Age** | **Count** | **Average Monthly Benefit** |
|---|---|---|
| **0-45** | | |
| **45-49** | 1 | 129 |
| **50-54** | 4 | 1,345 |
| **55-59** | 16 | 3,041 |
| **60-64** | 16 | 2,909 |
| **65-69** | 10 | 1,809 |
| **70-74** | 3 | 1,416 |
| **75-79** | 5 | 345 |
| **80-84** | 2 | 2,664 |
| **85-89** | 5 | 405 |
| **90-94** | 2 | 417 |
| **95-99** | | |
| **100+** | | |
| **Total** | 64 | 2,078 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Knappa Svensen Burnside Rural Fire Protection District/2760
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Knappa Svensen Burnside Rural Fire Protection District/2760

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Knappa Svensen Burnside Rural Fire Protection District -- #2760

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Knappa Svensen Burnside Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Knappa Svensen Burnside Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Knappa Svensen Burnside Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.46% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (1.60%) | (1.60%) | (1.60%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.01%** | **4.82%** | **7.55%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **11.60%** | **5.31%** | **8.04%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 102%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.86% | 10.86% |
| Minimum July 1, 2015 Rate | 7.86% | 4.86% |
| Maximum July 1, 2015 Rate | 13.86% | 16.86% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 3 | 10 |
| Amortization factor | 3.089 | 7.952 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.65% | (2.46%) | (2.46%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.86% | (1.60%) | (1.60%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $252,595 | $211,049 | ($41,546) | 120% | $57,614 | (72%) |
| 12/31/2007 | 282,820 | 179,735 | (103,085) | 157% | 65,613 | (157%) |
| 12/31/2008 | 239,076 | 258,258 | 19,182 | 93% | 67,070 | 29% |
| 12/31/2009 | 281,947 | 266,881 | (15,066) | 106% | 71,483 | (21%) |
| 12/31/2010 | 314,770 | 288,809 | (25,961) | 109% | 72,007 | (36%) |
| 12/31/2011 | 331,085 | 326,025 | (5,060) | 102% | 78,399 | (6%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Knappa Svensen Burnside Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($5,060) | ($25,961) |
| Allocated pooled OPSRP UAL | 1,338 | 894 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (3,722) | (25,067) |
| Combined valuation payroll | 78,399 | 72,007 |
| Net pension UAL as a percentage of payroll | (5%) | (35%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,031 | $2,591 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $9,770 | $6,525 |
| Tier 1/Tier 2 valuation payroll | 78,399 | 72,007 |
| Tier 1/Tier 2 pension normal cost rate | 12.46% | 9.06% |
| Tier 1/ Tier 2 Actuarial accrued liability | $326,025 | $288,809 |
| Actuarial asset value | 331,085 | 314,770 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (5,060) | (25,961) |
| Tier 1/ Tier 2 Funded status | 102% | 109% |
| Combined valuation payroll | $78,399 | $72,007 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (6%) | (36%) |
| Tier 1/Tier 2 UAL rate | (1.60%) | (3.41%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 78,399 | 72,007 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $101,625 | $95,277 |
| 2. Employer reserves | 229,460 | 219,493 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$331,085** | **$314,770** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $314,770 |
| 2. Regular employer contributions | 4,992 |
| 3. Benefit payments and expenses | 0 |
| 4. Adjustments[2] | (1,454) |
| 5. Interest credited | 12,777 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$331,085** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $9,770 | $6,525 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$9,770** | **$6,525** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $9,770 | $9,770 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $326,025 | $288,809 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$326,025** | **$288,809** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$326,025** | **$288,809** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $326,025 | $326,025 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $326,025 | $288,809 |
| 2. Actuarial value of assets | 331,085 | 314,770 |
| 3. Unfunded accrued liability *(1. – 2.)* | (5,060) | (25,961) |
| 4. Funded percentage *(2. ÷ 1.)* | 102% | 109% |
| 5. Combined valuation payroll | $78,399 | $72,007 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (6%) | (36%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($135,113) | ($11,135) | ($10,335) | ($134,313) | ($11,553) |
| December 31, 2009 | $120,761 | $9,225 | $9,268 | $120,804 | $9,571 |
| December 31, 2011 | N/A | N/A | N/A | $8,449 | $624 |
| **Total** | | | | **($5,060)** | **($1,358)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $288,809 |
| b. Normal cost at December 31, 2010 | 6,525 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 23,627 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 318,961 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 318,961 |
| 2. Actuarial accrued liability at December 31, 2011 | 326,025 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (7,064) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 314,770 |
| b. Contributions for 2011[1] | 4,992 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 25,381 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 345,144 |
| 5. Actuarial value of assets at December 31, 2011 | 331,085 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (14,059) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($21,123)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($25,961)** |
| 2. Expected increase | (222) |
| 3. Liability (gain)/loss | 7,064 |
| 4. Asset (gain)/loss | 14,059 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($5,060)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $9,770 | $78,399 | 12.46% | $6,525 | $72,007 | 9.06% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$9,770** | **$78,399** | **12.46%** | **$6,525** | **$72,007** | **9.06%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($5,060) | ($25,961) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (1,358) | (2,767) |
| 3. Combined valuation payroll | 78,399 | 72,007 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.73%) | (3.84%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.46% | 9.06% |
| b. Tier 1/Tier 2 UAL rate | (1.73%) | (3.84%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.86% | 5.34% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 8.65% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.65% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.73% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 102% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.65% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.65% |
| 7. | July 1, 2013 total pension rate, before adjustment | 10.86% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.73%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.73%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 10.86% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.46% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.46% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 10.86% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.46% | 9.06% |
| b. Tier 1/Tier 2 UAL rate | (1.73%) | (3.53%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 10.86% | 5.65% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $78,399 | $78,399 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 78,399 | 78,399 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$0** | **$78,399** | **$78,399** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **1** | **0** | **0** | **1** | **1** | **0** | **0** | **1** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | 1 | | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | | **1** | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Lakeside Water District/2644
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Lakeside Water District/2644

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Lakeside Water District -- #2644

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Lakeside Water District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lakeside Water District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Lakeside Water District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.91% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 7.80% | 7.80% | 7.80% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.86%** | **14.22%** | **16.95%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **18.45%** | **14.71%** | **17.44%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 75%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.71% | 17.71% |
| Minimum July 1, 2015 Rate | 14.17% | 10.63% |
| Maximum July 1, 2015 Rate | 21.25% | 24.79% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 20 | 30 |
| Amortization factor | 13.653 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.60% | 8.25% | 8.25% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.71% | 7.80% | 7.80% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $576,607 | $578,529 | $1,922 | 100% | $86,545 | 2% |
| 12/31/2007 | 589,246 | 587,300 | (1,946) | 100% | 126,102 | (2%) |
| 12/31/2008 | 409,070 | 584,065 | 174,995 | 70% | 125,013 | 140% |
| 12/31/2009 | 460,495 | 583,881 | 123,386 | 79% | 88,065 | 140% |
| 12/31/2010 | 486,366 | 620,803 | 134,437 | 78% | 113,608 | 118% |
| 12/31/2011 | 476,386 | 632,094 | 155,708 | 75% | 148,317 | 105% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Lakeside Water District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $155,708 | $134,437 |
| Allocated pooled OPSRP UAL | 2,531 | 1,411 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 158,239 | 135,848 |
| Combined valuation payroll | 148,317 | 113,608 |
| Net pension UAL as a percentage of payroll | 107% | 120% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,842 | $4,087 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $7,682 | $7,722 |
| Tier 1/Tier 2 valuation payroll | 77,480 | 79,778 |
| Tier 1/Tier 2 pension normal cost rate | 9.91% | 9.68% |
| Tier 1/ Tier 2 Actuarial accrued liability | $632,094 | $620,803 |
| Actuarial asset value | 476,386 | 486,366 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 155,708 | 134,437 |
| Tier 1/ Tier 2 Funded status | 75% | 78% |
| Combined valuation payroll | $148,317 | $113,608 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 105% | 118% |
| Tier 1/Tier 2 UAL rate | 7.80% | 7.13% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 3 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 5 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 148,317 | 113,608 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $42,145 | $42,379 |
| 2. Employer reserves | 186,848 | 172,221 |
| 3. Benefits in force reserve | 247,393 | 271,766 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$476,386** | **$486,366** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $486,366 |
| 2. | Regular employer contributions | 10,662 |
| 3. | Benefit payments and expenses | (41,449) |
| 4. | Adjustments[2] | 12,404 |
| 5. | Interest credited | 8,403 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$476,386** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 7,682 | 7,722 |
| **Total** | **$7,682** | **$7,722** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $7,682 | $7,682 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 110,893 | 100,824 |
| ▪ **Total Active Members** | **$110,893** | **$100,824** |
| Dormant Members | 71,259 | 72,501 |
| Retired Members and Beneficiaries | 449,942 | 447,478 |
| **Total Actuarial Accrued Liability** | **$632,094** | **$620,803** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $632,094 | $632,094 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $632,094 | $620,803 |
| 2. Actuarial value of assets | 476,386 | 486,366 |
| 3. Unfunded accrued liability *(1. – 2.)* | 155,708 | 134,437 |
| 4. Funded percentage *(2. ÷ 1.)* | 75% | 78% |
| 5. Combined valuation payroll | $148,317 | $113,608 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 105% | 118% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($29,136) | ($2,402) | ($2,229) | ($28,963) | ($2,492) |
| December 31, 2009 | $153,058 | $11,692 | $11,747 | $153,113 | $12,130 |
| December 31, 2011 | N/A | N/A | N/A | $31,558 | $2,331 |
| **Total** | | | | **$155,708** | **$11,969** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $620,803 |
| b. Normal cost at December 31, 2010 | 7,722 |
| c. Benefit payments during 2011 | (41,177) |
| d. Interest at 8.0% to December 31, 2011 | 48,635 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 635,983 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 635,983 |
| 2. Actuarial accrued liability at December 31, 2011 | 632,094 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 3,889 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 486,366 |
| b. Contributions for 2011[1] | 10,662 |
| c. Benefit payments and expenses during 2011 | (41,449) |
| d. Interest at 8.0% to December 31, 2011 | 37,678 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 493,258 |
| 5. Actuarial value of assets at December 31, 2011 | 476,386 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (16,871) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($12,982)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$134,437** |
| 2. Expected increase | 8,289 |
| 3. Liability (gain)/loss | (3,889) |
| 4. Asset (gain)/loss | 16,871 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$155,708** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 7,682 | 77,480 | 9.91% | 7,722 | 79,778 | 9.68% |
| **Total** | **$7,682** | **$77,480** | **9.91%** | **$7,722** | **$79,778** | **9.68%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $155,708 | $134,437 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 11,969 | 10,067 |
| 3. Combined valuation payroll | 148,317 | 113,608 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.07% | 8.86% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.91% | 9.68% |
| b. Tier 1/Tier 2 UAL rate | 8.07% | 8.86% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 18.11% | 18.66% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 13.21% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.21% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.64% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 75% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.50% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 17.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 18.11% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.40%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.07% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 7.67% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.71% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.91% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.91% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.91% | 9.68% |
| b. Tier 1/Tier 2 UAL rate | 7.67% | 7.01% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 17.71% | 16.81% |

# Data

## Demographic Information

### Employer Valuation Payroll

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 77,480 | 0 | 77,480 |
| Tier 1/Tier 2 valuation payroll | 77,480 | 0 | 77,480 |
| OPSRP valuation payroll | 70,837 | 0 | 70,837 |
| **Combined valuation payroll** | **$148,317** | **$0** | **$148,317** |

### Employer Member Census

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 2 | 3 | 0 | 1 | 1 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 2 | 3 | 0 | 1 | 1 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 3 | 0 | 3 | 0 | 2 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| **Grand Total Number of Members** | **5** | **5** | **2** | **12** | **5** | **4** | **1** | **10** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | 1 | | | | | | | **1** |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | **1** | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | 1 | 1,158 |
| 50-54 | | |
| 55-59 | 2 | 4 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 3 | 389 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 151 |
| 65-69 | 1 | 204 |
| 70-74 | 2 | 857 |
| 75-79 | 1 | 1,176 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 5 | 649 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Lane County/2008
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman



In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Lane County/2008

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Lane County -- #2008

**Secondary Employers**

2047 Lane County Fair Board

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Lane County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lane County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Lane County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.32% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.65% | 4.65% | 4.65% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.12%** | **11.07%** | **13.80%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.71%** | **11.56%** | **14.29%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 82%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.97% | 13.97% |
| Minimum July 1, 2015 Rate | 10.97% | 7.97% |
| Maximum July 1, 2015 Rate | 16.97% | 19.97% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.66% | 6.40% | 6.40% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.46% | 8.14% | 8.14% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $579,407,477 | $529,502,318 | ($49,905,158) | 109% | $75,766,410 | (66%) |
| 12/31/2007 | 612,335,125 | 550,459,256 | (61,875,869) | 111% | 74,343,062 | (83%) |
| 12/31/2008 | 446,608,724 | 559,238,374 | 112,629,650 | 80% | 73,699,021 | 153% |
| 12/31/2009 | 500,408,457 | 583,156,954 | 82,748,497 | 86% | 76,335,867 | 108% |
| 12/31/2010 | 530,061,782 | 608,521,838 | 78,460,056 | 87% | 82,587,626 | 95% |
| 12/31/2011 | 511,461,459 | 623,549,175 | 112,087,716 | 82% | 81,017,355 | 138% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Lane County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $112,087,716 | $78,460,056 |
| Allocated pooled OPSRP UAL | 1,382,348 | 1,025,428 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 113,470,064 | 79,485,484 |
| Combined valuation payroll | 81,017,355 | 82,587,626 |
| Net pension UAL as a percentage of payroll | 140% | 96% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,098,795 | $2,971,372 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5,145,404 | $5,089,286 |
| Tier 1/Tier 2 valuation payroll | 55,214,607 | 58,787,490 |
| Tier 1/Tier 2 pension normal cost rate | 9.32% | 8.66% |
| Tier 1/ Tier 2 Actuarial accrued liability | $623,549,175 | $608,521,838 |
| Actuarial asset value | 511,461,459 | 530,061,782 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 112,087,716 | 78,460,056 |
| Tier 1/ Tier 2 Funded status | 82% | 87% |
| Combined valuation payroll | $81,017,355 | $82,587,626 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 138% | 95% |
| Tier 1/Tier 2 UAL rate | 4.65% | 5.31% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 829 | 933 |
| Tier 1/Tier 2 dormant members | 371 | 344 |
| Tier 1/Tier 2 retirees and beneficiaries | 1,702 | 1,602 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 81,017,355 | 82,587,626 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $68,758,738 | $76,839,591 |
| 2. Employer reserves | 219,206,968 | 223,317,272 |
| 3. Benefits in force reserve | 223,495,753 | 229,904,919 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$511,461,459** | **$530,061,782** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $530,061,782 |
| 2. Regular employer contributions | 5,686,668 |
| 3. Benefit payments and expenses | (37,445,171) |
| 4. Adjustments[2] | (839,830) |
| 5. Interest credited | 13,998,010 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$511,461,459** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $810,625 | $839,081 |
| Tier 1 General Service | 1,002,178 | 944,589 |
| Tier 2 Police & Fire | 1,237,216 | 1,215,964 |
| Tier 2 General Service | 2,095,385 | 2,089,652 |
| **Total** | **$5,145,404** | **$5,089,286** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $5,145,404 | $5,145,404 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $30,245,515 | $30,261,683 |
| ▪ Tier 1 General Service | 103,682,039 | 119,415,245 |
| ▪ Tier 2 Police & Fire | 15,914,230 | 14,604,938 |
| ▪ Tier 2 General Service | 28,006,780 | 26,151,841 |
| ▪ **Total Active Members** | **$177,848,564** | **$190,433,707** |
| Dormant Members | 39,220,810 | 39,537,644 |
| Retired Members and Beneficiaries | 406,479,801 | 378,550,487 |
| **Total Actuarial Accrued Liability** | **$623,549,175** | **$608,521,838** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $623,549,175 | $623,549,175 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $623,549,175 | $608,521,838 |
| 2. Actuarial value of assets | 511,461,459 | 530,061,782 |
| 3. Unfunded accrued liability *(1. – 2.)* | 112,087,716 | 78,460,056 |
| 4. Funded percentage *(2. ÷ 1.)* | 82% | 87% |
| 5. Combined valuation payroll | $81,017,355 | $82,587,626 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 138% | 95% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($81,241,160) | ($6,695,145) | ($6,214,292) | ($80,760,307) | ($6,946,213) |
| December 31, 2009 | $164,694,965 | $12,580,964 | $12,640,046 | $164,754,047 | $13,052,750 |
| December 31, 2011 | N/A | N/A | N/A | $28,093,976 | $2,074,734 |
| **Total** | | | | **$112,087,716** | **$8,181,271** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $608,521,838 |
| b. Normal cost at December 31, 2010 | 5,089,286 |
| c. Benefit payments during 2011 | (37,199,733) |
| d. Interest at 8.0% to December 31, 2011 | 47,600,901 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 624,012,292 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 624,012,292 |
| 2. Actuarial accrued liability at December 31, 2011 | 623,549,175 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 463,117 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 530,061,782 |
| b. Contributions for 2011[1] | 5,686,668 |
| c. Benefit payments and expenses during 2011 | (37,445,171) |
| d. Interest at 8.0% to December 31, 2011 | 41,134,602 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 539,437,882 |
| 5. Actuarial value of assets at December 31, 2011 | 511,461,459 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (27,976,423) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($27,513,306)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$78,460,056** |
| 2. Expected increase | 6,114,354 |
| 3. Liability (gain)/loss | (463,117) |
| 4. Asset (gain)/loss | 27,976,423 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$112,087,716** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $810,625 | $6,209,688 | 13.05% | $839,081 | $6,616,722 | 12.68% |
| Tier 1 General Service | 1,002,178 | 21,036,895 | 4.76% | 944,589 | 23,596,150 | 4.00% |
| Tier 2 Police & Fire | 1,237,216 | 8,558,517 | 14.46% | 1,215,964 | 8,693,001 | 13.99% |
| Tier 2 General Service | 2,095,385 | 19,409,507 | 10.80% | 2,089,652 | 19,881,617 | 10.51% |
| **Total** | **$5,145,404** | **$55,214,607** | **9.32%** | **$5,089,286** | **$58,787,490** | **8.66%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $112,087,716 | $78,460,056 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 8,181,271 | 5,517,032 |
| 3. Combined valuation payroll | 81,017,355 | 82,587,626 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 10.10% | 6.68% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.32% | 8.66% |
| b. Tier 1/Tier 2 UAL rate | 10.10% | 6.68% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 19.55% | 15.46% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 10.97% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.97% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.19% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 82% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.97% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.97% |
| 7. | July 1, 2013 total pension rate, before adjustment | 19.55% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (5.58%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 10.10% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.52% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.97% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.32% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.32% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.97% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.32% | 8.66% |
| b. Tier 1/Tier 2 UAL rate | 4.52% | 5.19% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 13.97% | 13.97% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $21,036,895 | $6,209,688 | $27,246,583 |
| Tier 2 | 19,409,507 | 8,558,517 | 27,968,024 |
| Tier 1/Tier 2 valuation payroll | 40,446,402 | 14,768,205 | 55,214,607 |
| OPSRP valuation payroll | 22,782,595 | 3,020,153 | 25,802,748 |
| **Combined valuation payroll** | **$63,228,997** | **$17,788,358** | **$81,017,355** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 314 | 333 | 474 | 1,121 | 380 | 361 | 715 | 1,456 |
| Police & Fire | 71 | 111 | 52 | 234 | 76 | 116 | 44 | 236 |
| Total | 385 | 444 | 526 | 1,355 | 456 | 477 | 759 | 1,692 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 192 | 124 | N/A | 316 | 220 | 163 | N/A | 383 |
| Police & Fire | 20 | 31 | N/A | 51 | 24 | 30 | N/A | 54 |
| Total | 212 | 155 | N/A | 367 | 244 | 193 | N/A | 437 |
| **Dormant Members** | | | | | | | | |
| General Service | 212 | 133 | 23 | 368 | 207 | 103 | 20 | 330 |
| Police & Fire | 14 | 12 | 2 | 28 | 18 | 16 | 2 | 36 |
| Total | 226 | 145 | 25 | 396 | 225 | 119 | 22 | 366 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1,390 | 71 | 8 | 1,469 | 1,336 | 37 | 3 | 1,376 |
| Police & Fire | 228 | 13 | 0 | 241 | 225 | 4 | 0 | 229 |
| Total | 1,618 | 84 | 8 | 1,710 | 1,561 | 41 | 3 | 1,605 |
| **Grand Total Number of Members** | **2,441** | **828** | **559** | **3,828** | **2,486** | **830** | **784** | **4,100** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 13 | 9 | | | | | | | **22** |
| **35-39** | 1 | 27 | 46 | 3 | | | | | | **77** |
| **40-44** | | 16 | 64 | 24 | 3 | | | | | **107** |
| **45-49** | | 11 | 53 | 28 | 39 | 5 | | | | **136** |
| **50-54** | | 21 | 63 | 23 | 45 | 19 | 3 | | | **174** |
| **55-59** | | 13 | 54 | 42 | 57 | 18 | 12 | 2 | | **198** |
| **60-64** | | 11 | 30 | 21 | 19 | 10 | 2 | 2 | | **95** |
| **65-69** | | 1 | 9 | 2 | 6 | | | | | **18** |
| **70-74** | | 2 | | | | | | | | **2** |
| **75+** | | | | | | | | | | |
| **Total** | **1** | **115** | **328** | **143** | **169** | **52** | **17** | **4** | | **829** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 2 | 28 |
| **30-34** | 8 | 206 |
| **35-39** | 19 | 777 |
| **40-44** | 40 | 1,035 |
| **45-49** | 51 | 1,342 |
| **50-54** | 59 | 1,083 |
| **55-59** | 88 | 1,034 |
| **60-64** | 60 | 1,330 |
| **65-69** | 29 | 923 |
| **70-74** | 2 | 757 |
| **75+** | 13 | 230 |
| **Total** | 371 | 1,057 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 10 | 1,502 |
| **45-49** | 8 | 2,238 |
| **50-54** | 29 | 1,925 |
| **55-59** | 161 | 1,976 |
| **60-64** | 428 | 1,875 |
| **65-69** | 402 | 1,928 |
| **70-74** | 269 | 1,526 |
| **75-79** | 166 | 1,370 |
| **80-84** | 102 | 1,186 |
| **85-89** | 83 | 974 |
| **90-94** | 34 | 433 |
| **95-99** | 10 | 551 |
| **100+** | | |
| **Total** | 1,702 | 1,671 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon.  The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Lane Rural Fire/Rescue/2565
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Lane Rural Fire/Rescue/2565

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Lane Rural Fire/Rescue -- #2565

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Lane Rural Fire/Rescue to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Lane Rural Fire/Rescue.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Lane Rural Fire/Rescue*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.87% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 6.50% | 6.50% | 6.50% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **20.52%** | **12.92%** | **15.65%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **21.11%** | **13.41%** | **16.14%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 74%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 20.37% | 20.37% |
| Minimum July 1, 2015 Rate | 16.30% | 12.23% |
| Maximum July 1, 2015 Rate | 24.44% | 28.51% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 22 | 30 |
| Amortization factor | 14.319 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.28% | 1.85% | 1.85% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 20.37% | 6.50% | 6.50% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $3,184,682 | $2,914,938 | ($269,744) | 109% | $727,227 | (37%) |
| 12/31/2007 | 3,488,261 | 3,225,357 | (262,904) | 108% | 788,728 | (33%) |
| 12/31/2008 | 2,682,464 | 3,523,653 | 841,189 | 76% | 946,366 | 89% |
| 12/31/2009 | 3,129,983 | 3,458,015 | 328,032 | 91% | 1,085,815 | 30% |
| 12/31/2010 | 3,311,438 | 3,901,454 | 590,016 | 85% | 1,125,139 | 52% |
| 12/31/2011 | 3,105,359 | 4,185,309 | 1,079,950 | 74% | 1,179,480 | 92% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Lane Rural Fire/Rescue*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,079,950 | $590,016 |
| Allocated pooled OPSRP UAL | 20,125 | 13,970 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,100,075 | 603,986 |
| Combined valuation payroll | 1,179,480 | 1,125,139 |
| Net pension UAL as a percentage of payroll | 93% | 54% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $30,555 | $40,481 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $78,618 | $79,393 |
| Tier 1/Tier 2 valuation payroll | 566,825 | 607,845 |
| Tier 1/Tier 2 pension normal cost rate | 13.87% | 13.06% |
| Tier 1/ Tier 2 Actuarial accrued liability | $4,185,309 | $3,901,454 |
| Actuarial asset value | 3,105,359 | 3,311,438 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,079,950 | 590,016 |
| Tier 1/ Tier 2 Funded status | 74% | 85% |
| Combined valuation payroll | $1,179,480 | $1,125,139 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 92% | 52% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 6.50% | 3.88% |
| Tier 1/Tier 2 active members [1] | 7 | 9 |
| Tier 1/Tier 2 dormant members | 2 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 10 | 9 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,179,480 | 1,125,139 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $137,107 | $307,102 |
| 2. Employer reserves | 1,323,239 | 1,580,945 |
| 3. Benefits in force reserve | 1,645,013 | 1,423,391 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$3,105,359** | **$3,311,438** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $3,311,438 |
| 2. | Regular employer contributions | 73,042 |
| 3. | Benefit payments and expenses | (275,611) |
| 4. | Adjustments[2] | (93,320) |
| 5. | Interest credited | 89,811 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$3,105,359** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $33,676 | $27,881 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 44,942 | 51,512 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$78,618** | **$79,393** |

### ***Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes***

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $78,618 | $78,618 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $478,996 | $933,174 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 538,497 | 484,147 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$1,017,493** | **$1,417,321** |
| Dormant Members | 175,971 | 140,445 |
| Retired Members and Beneficiaries | 2,991,845 | 2,343,688 |
| **Total Actuarial Accrued Liability** | **$4,185,309** | **$3,901,454** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $4,185,309 | $4,185,309 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $4,185,309 | $3,901,454 |
| 2. Actuarial value of assets | 3,105,359 | 3,311,438 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,079,950 | 590,016 |
| 4. Funded percentage *(2. ÷ 1.)* | 74% | 85% |
| 5. Combined valuation payroll | $1,179,480 | $1,125,139 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 92% | 52% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($341,337) | ($28,131) | ($26,109) | ($339,315) | ($29,186) |
| December 31, 2009 | $672,275 | $51,354 | $51,596 | $672,517 | $53,280 |
| December 31, 2011 | N/A | N/A | N/A | $746,748 | $55,147 |
| **Total** | | | | **$1,079,950** | **$79,241** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,901,454 |
| b. Normal cost at December 31, 2010 | 79,393 |
| c. Benefit payments during 2011 | (273,804) |
| d. Interest at 8.0% to December 31, 2011 | 307,516 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 4,014,559 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 4,014,559 |
| 2. Actuarial accrued liability at December 31, 2011 | 4,185,309 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (170,750) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,311,438 |
| b. Contributions for 2011[1] | 73,042 |
| c. Benefit payments and expenses during 2011 | (275,611) |
| d. Interest at 8.0% to December 31, 2011 | 256,812 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,365,681 |
| 5. Actuarial value of assets at December 31, 2011 | 3,105,359 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (260,322) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($431,072)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$590,016** |
| 2. Expected increase | 58,862 |
| 3. Liability (gain)/loss | 170,750 |
| 4. Asset (gain)/loss | 260,322 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,079,950** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $33,676 | $255,662 | 13.17% | $27,881 | $230,926 | 12.07% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 44,942 | 311,163 | 14.44% | 51,512 | 376,919 | 13.67% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$78,618** | **$566,825** | **13.87%** | **$79,393** | **$607,845** | **13.06%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,079,950 | $590,016 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 79,241 | 42,356 |
| 3. Combined valuation payroll | 1,179,480 | 1,125,139 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 6.72% | 3.76% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.87% | 13.06% |
| b. Tier 1/Tier 2 UAL rate | 6.72% | 3.76% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 20.72% | 16.94% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 15.43% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.43% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 3.09% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.09% |
| | c. Funded percentage | 74% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.94% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.49% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 20.37% |
| 7. | July 1, 2013 total pension rate, before adjustment | 20.72% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.35%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 6.72% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 6.37% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 20.37% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.87% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.87% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 20.37% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.87% | 13.06% |
| b. Tier 1/Tier 2 UAL rate | 6.37% | 3.76% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 20.37% | 16.94% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $255,662 | $255,662 |
| Tier 2 | 0 | 311,163 | 311,163 |
| Tier 1/Tier 2 valuation payroll | 0 | 566,825 | 566,825 |
| OPSRP valuation payroll | 35,640 | 577,015 | 612,655 |
| **Combined valuation payroll** | **$35,640** | **$1,143,840** | **$1,179,480** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 3 |
| Police & Fire | 3 | 4 | 7 | 14 | 4 | 5 | 6 | 15 |
| Total | 3 | 4 | 8 | 15 | 4 | 5 | 9 | 18 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 1 | N/A | 1 | 0 | 2 | N/A | 2 |
| Total | 0 | 1 | N/A | 1 | 0 | 2 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| Total | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Police & Fire | 8 | 0 | 0 | 8 | 7 | 0 | 0 | 7 |
| Total | 10 | 0 | 0 | 10 | 9 | 0 | 0 | 9 |
| **Grand Total Number of Members** | **14** | **6** | **8** | **28** | **14** | **7** | **9** | **30** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | 1 | | | | | | | | **1** |
| **45-49** | | 1 | | 1 | | | | | | **2** |
| **50-54** | | | 1 | | 1 | | | | | **2** |
| **55-59** | | | | | 1 | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **3** | **1** | **1** | **2** | | | | | **7** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | 460 |
| **45-49** | | |
| **50-54** | 1 | 970 |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 2 | 715 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 3,133 |
| **55-59** | | |
| **60-64** | 3 | 1,110 |
| **65-69** | 5 | 2,287 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | 1 | 1,121 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 10 | 1,902 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

League of Oregon Cities/2521
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
League of Oregon Cities/2521

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

League of Oregon Cities -- #2521

**Secondary Employers**

| | |
|---|---|
| 2693 | City/County Insurance Services |
| 2738 | Employes Benefit Services Trust |

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for League of Oregon Cities to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to League of Oregon Cities.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for League of Oregon Cities*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 9.84% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.80% | 4.80% | 4.80% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.79%** | **11.22%** | **13.95%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.38%** | **11.71%** | **14.44%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 76%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.64% | 14.64% |
| Minimum July 1, 2015 Rate | 11.64% | 8.64% |
| Maximum July 1, 2015 Rate | 17.64% | 20.64% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 19 | 30 |
| Amortization factor | 13.024 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.81% | 3.23% | 3.23% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.64% | 4.80% | 4.80% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $12,945,666 | $12,370,767 | ($574,899) | 105% | $4,468,772 | (13%) |
| 12/31/2007 | 13,393,336 | 12,922,544 | (470,792) | 104% | 5,328,280 | (9%) |
| 12/31/2008 | 10,276,038 | 13,452,837 | 3,176,799 | 76% | 5,309,971 | 60% |
| 12/31/2009 | 11,310,015 | 14,190,669 | 2,880,654 | 80% | 5,344,096 | 54% |
| 12/31/2010 | 12,001,208 | 14,979,241 | 2,978,033 | 80% | 5,910,498 | 50% |
| 12/31/2011 | 11,873,512 | 15,628,011 | 3,754,499 | 76% | 6,154,733 | 61% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *League of Oregon Cities*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $3,754,499 | $2,978,033 |
| Allocated pooled OPSRP UAL | 105,014 | 73,386 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 3,859,513 | 3,051,419 |
| Combined valuation payroll | 6,154,733 | 5,910,498 |
| Net pension UAL as a percentage of payroll | 63% | 52% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $159,441 | $212,650 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $302,620 | $259,133 |
| Tier 1/Tier 2 valuation payroll | 3,074,735 | 2,778,277 |
| Tier 1/Tier 2 pension normal cost rate | 9.84% | 9.33% |
| Tier 1/ Tier 2 Actuarial accrued liability | $15,628,011 | $14,979,241 |
| Actuarial asset value | 11,873,512 | 12,001,208 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 3,754,499 | 2,978,033 |
| Tier 1/ Tier 2 Funded status | 76% | 80% |
| Combined valuation payroll | $6,154,733 | $5,910,498 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 61% | 50% |
| Tier 1/Tier 2 UAL rate | 4.80% | 3.88% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 32 | 32 |
| Tier 1/Tier 2 dormant members | 12 | 14 |
| Tier 1/Tier 2 retirees and beneficiaries | 36 | 34 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 6,154,733 | 5,910,498 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,910,020 | $2,058,161 |
| 2. Employer reserves | 5,016,837 | 4,826,771 |
| 3. Benefits in force reserve | 4,946,655 | 5,116,277 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$11,873,512** | **$12,001,208** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $12,001,208 |
| 2. Regular employer contributions | 300,855 |
| 3. Benefit payments and expenses | (828,778) |
| 4. Adjustments[2] | 82,183 |
| 5. Interest credited | 318,043 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$11,873,512** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 133,380 | 113,264 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 169,240 | 145,869 |
| **Total** | **$302,620** | **$259,133** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $302,620 | $302,620 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 4,110,792 | 3,934,202 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 1,802,221 | 1,568,421 |
| ▪ **Total Active Members** | **$5,913,013** | **$5,502,623** |
| Dormant Members | 718,338 | 1,052,400 |
| Retired Members and Beneficiaries | 8,996,660 | 8,424,218 |
| **Total Actuarial Accrued Liability** | **$15,628,011** | **$14,979,241** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $15,628,011 | $15,628,011 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $15,628,011 | $14,979,241 |
| 2. Actuarial value of assets | 11,873,512 | 12,001,208 |
| 3. Unfunded accrued liability *(1. – 2.)* | 3,754,499 | 2,978,033 |
| 4. Funded percentage *(2. ÷ 1.)* | 76% | 80% |
| 5. Combined valuation payroll | $6,154,733 | $5,910,498 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 61% | 50% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($803,651) | ($66,229) | ($61,473) | ($798,895) | ($68,713) |
| December 31, 2009 | $3,697,481 | $282,449 | $283,775 | $3,698,807 | $293,041 |
| December 31, 2011 | N/A | N/A | N/A | $854,587 | $63,111 |
| **Total** | | | | **$3,754,499** | **$287,439** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $14,979,241 |
| b. Normal cost at December 31, 2010 | 259,133 |
| c. Benefit payments during 2011 | (823,346) |
| d. Interest at 8.0% to December 31, 2011 | 1,186,136 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 15,601,164 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 15,601,164 |
| 2. Actuarial accrued liability at December 31, 2011 | 15,628,011 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (26,847) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 12,001,208 |
| b. Contributions for 2011[1] | 300,855 |
| c. Benefit payments and expenses during 2011 | (828,778) |
| d. Interest at 8.0% to December 31, 2011 | 938,980 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 12,412,265 |
| 5. Actuarial value of assets at December 31, 2011 | 11,873,512 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (538,754) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($565,601)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,978,033** |
| 2. Expected increase | 210,865 |
| 3. Liability (gain)/loss | 26,847 |
| 4. Asset (gain)/loss | 538,754 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$3,754,499** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 133,380 | 1,453,833 | 9.17% | 113,264 | 1,329,926 | 8.52% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 169,240 | 1,620,902 | 10.44% | 145,869 | 1,448,351 | 10.07% |
| **Total** | **$302,620** | **$3,074,735** | **9.84%** | **$259,133** | **$2,778,277** | **9.33%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $3,754,499 | $2,978,033 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 287,439 | 222,438 |
| 3. Combined valuation payroll | 6,154,733 | 5,910,498 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.67% | 3.76% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.84% | 9.33% |
| b. Tier 1/Tier 2 UAL rate | 4.67% | 3.76% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.64% | 13.21% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 10.59% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.59% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.12% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 76% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.20% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 6.39% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.79% |
| 7. | July 1, 2013 total pension rate, before adjustment | 14.64% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.67% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.67% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.64% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.84% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.84% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.64% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.84% | 9.33% |
| b. Tier 1/Tier 2 UAL rate | 4.67% | 3.76% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.64% | 13.21% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,453,833 | $0 | $1,453,833 |
| Tier 2 | 1,620,902 | 0 | 1,620,902 |
| Tier 1/Tier 2 valuation payroll | 3,074,735 | 0 | 3,074,735 |
| OPSRP valuation payroll | 3,079,998 | 0 | 3,079,998 |
| **Combined valuation payroll** | **$6,154,733** | **$0** | **$6,154,733** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 14 | 18 | 42 | 74 | 14 | 18 | 45 | 77 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 14 | 18 | 42 | 74 | 14 | 18 | 45 | 77 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 8 | 6 | N/A | 14 | 7 | 4 | N/A | 11 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 8 | 6 | N/A | 14 | 7 | 4 | N/A | 11 |
| **Dormant Members** | | | | | | | | |
| General Service | 5 | 7 | 3 | 15 | 7 | 7 | 0 | 14 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 7 | 3 | 15 | 7 | 7 | 0 | 14 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 34 | 2 | 2 | 38 | 33 | 1 | 2 | 36 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 34 | 2 | 2 | 38 | 33 | 1 | 2 | 36 |
| **Grand Total Number of Members** | **61** | **33** | **47** | **141** | **61** | **30** | **47** | **138** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | 1 | | | | | | | | **1** |
| **30-34** | | | | | | | | | | |
| **35-39** | | 2 | 2 | | | | | | | **4** |
| **40-44** | | 3 | 2 | 1 | | | | | | **6** |
| **45-49** | | | 2 | 1 | 1 | | | | | **4** |
| **50-54** | | 1 | | 2 | | 2 | 1 | | | **6** |
| **55-59** | | 1 | 2 | 2 | | | | | | **5** |
| **60-64** | | | 2 | 1 | 1 | | | | | **4** |
| **65-69** | | | 1 | | | 1 | | | | **2** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **8** | **11** | **7** | **2** | **3** | **1** | | | **32** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 2 | 1,415 |
| **35-39** | 1 | 1,729 |
| **40-44** | 4 | 726 |
| **45-49** | 1 | 152 |
| **50-54** | 1 | 2,208 |
| **55-59** | 1 | 830 |
| **60-64** | 2 | 471 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 12 | 966 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 4 | 1,283 |
| **60-64** | 9 | 1,675 |
| **65-69** | 9 | 2,291 |
| **70-74** | 8 | 1,542 |
| **75-79** | 4 | 2,440 |
| **80-84** | 2 | 437 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 36 | 1,772 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Linn County/2014
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Linn County/2014

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Linn County -- #2014

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Linn County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Linn County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Linn County*

| | **Payroll** | | |
|---|---|---|---|
| | | **OPSRP** | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 8.00% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 9.32% | 9.32% | 9.32% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.47%** | **15.74%** | **18.47%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **18.06%** | **16.23%** | **18.96%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.32% | 17.32% |
| Minimum July 1, 2015 Rate | 13.86% | 10.40% |
| Maximum July 1, 2015 Rate | 20.78% | 24.24% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 30 |
| Amortization factor | 12.692 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.51% | 6.81% | 6.81% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.32% | 9.32% | 9.32% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $149,163,940 | $155,750,720 | $6,586,780 | 96% | $29,310,235 | 22% |
| 12/31/2007 | 158,689,848 | 160,988,659 | 2,298,811 | 99% | 30,341,309 | 8% |
| 12/31/2008 | 119,192,057 | 165,101,630 | 45,909,573 | 72% | 30,606,529 | 150% |
| 12/31/2009 | 135,458,576 | 173,289,627 | 37,831,051 | 78% | 32,768,668 | 115% |
| 12/31/2010 | 145,618,230 | 182,831,652 | 37,213,422 | 80% | 34,453,366 | 108% |
| 12/31/2011 | 144,346,411 | 184,066,697 | 39,720,286 | 78% | 34,012,953 | 117% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Linn County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $39,720,286 | $37,213,422 |
| Allocated pooled OPSRP UAL | 580,342 | 427,781 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 40,300,628 | 37,641,203 |
| Combined valuation payroll | 34,012,953 | 34,453,366 |
| Net pension UAL as a percentage of payroll | 118% | 109% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $881,123 | $1,239,578 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $1,925,352 | $2,513,049 |
| Tier 1/Tier 2 valuation payroll | 24,059,585 | 25,237,582 |
| Tier 1/Tier 2 pension normal cost rate | 8.00% | 9.96% |
| Tier 1/ Tier 2 Actuarial accrued liability | $184,066,697 | $182,831,652 |
| Actuarial asset value | 144,346,411 | 145,618,230 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 39,720,286 | 37,213,422 |
| Tier 1/ Tier 2 Funded status | 78% | 80% |
| Combined valuation payroll | $34,012,953 | $34,453,366 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 117% | 108% |
| Tier 1/Tier 2 UAL rate | 9.32% | 8.34% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 386 | 429 |
| Tier 1/Tier 2 dormant members | 174 | 162 |
| Tier 1/Tier 2 retirees and beneficiaries | 540 | 522 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 34,012,953 | 34,453,366 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $29,504,875 | $30,790,817 |
| 2. Employer reserves | 63,612,477 | 61,876,744 |
| 3. Benefits in force reserve | 51,229,059 | 52,950,669 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$144,346,411** | **$145,618,230** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $145,618,230 |
| 2. Regular employer contributions | 3,861,493 |
| 3. Benefit payments and expenses | (8,583,075) |
| 4. Adjustments [2] | (595,433) |
| 5. Interest credited | 4,045,197 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$144,346,411** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $71,356 | $583,252 |
| Tier 1 General Service | 684,215 | 553,025 |
| Tier 2 Police & Fire | 48,049 | 528,927 |
| Tier 2 General Service | 1,121,732 | 847,845 |
| **Total** | **$1,925,352** | **$2,513,049** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $1,925,352 | $1,925,352 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $15,150,602 | $18,198,297 |
| ▪ Tier 1 General Service | 45,769,608 | 47,324,856 |
| ▪ Tier 2 Police & Fire | 4,453,275 | 6,000,903 |
| ▪ Tier 2 General Service | 12,347,101 | 11,740,303 |
| ▪ **Total Active Members** | **$77,720,586** | **$83,264,359** |
| Dormant Members | 13,173,970 | 12,381,243 |
| Retired Members and Beneficiaries | 93,172,141 | 87,186,050 |
| **Total Actuarial Accrued Liability** | **$184,066,697** | **$182,831,652** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $184,066,697 | $184,066,697 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $184,066,697 | $182,831,652 |
| 2. Actuarial value of assets | 144,346,411 | 145,618,230 |
| 3. Unfunded accrued liability *(1. – 2.)* | 39,720,286 | 37,213,422 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 80% |
| 5. Combined valuation payroll | $34,012,953 | $34,453,366 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 117% | 108% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,799,256) | ($148,278) | ($137,629) | ($1,788,607) | ($153,838) |
| December 31, 2009 | $39,754,158 | $3,036,800 | $3,051,061 | $39,768,419 | $3,150,680 |
| December 31, 2011 | N/A | N/A | N/A | $1,740,474 | $128,534 |
| **Total** | | | | **$39,720,286** | **$3,125,376** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $182,831,652 |
| b. Normal cost at December 31, 2010 | 2,513,049 |
| c. Benefit payments during 2011 | (8,526,817) |
| d. Interest at 8.0% to December 31, 2011 | 14,486,503 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 191,304,387 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 191,304,387 |
| 2. Actuarial accrued liability at December 31, 2011 | 184,066,697 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 7,237,690 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 145,618,230 |
| b. Contributions for 2011[1] | 3,861,493 |
| c. Benefit payments and expenses during 2011 | (8,583,075) |
| d. Interest at 8.0% to December 31, 2011 | 11,460,595 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 152,357,242 |
| 5. Actuarial value of assets at December 31, 2011 | 144,346,411 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (8,010,831) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($773,141)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$37,213,422** |
| 2. Expected increase | 1,733,723 |
| 3. Liability (gain)/loss | (7,237,690) |
| 4. Asset (gain)/loss | 8,010,831 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$39,720,286** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $71,356 | $397,151 | 17.97% | $583,252 | $3,622,011 | 16.10% |
| Tier 1 General Service | 684,215 | 12,077,948 | 5.66% | 553,025 | 9,800,603 | 5.64% |
| Tier 2 Police & Fire | 48,049 | 295,356 | 16.27% | 528,927 | 3,664,769 | 14.43% |
| Tier 2 General Service | 1,121,732 | 11,289,130 | 9.94% | 847,845 | 8,150,199 | 10.40% |
| **Total** | **$1,925,352** | **$24,059,585** | **8.00%** | **$2,513,049** | **$25,237,582** | **9.96%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $39,720,286 | $37,213,422 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 3,125,376 | 2,833,764 |
| 3. Combined valuation payroll | 34,012,953 | 34,453,366 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 9.19% | 8.22% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.00% | 9.96% |
| b. Tier 1/Tier 2 UAL rate | 9.19% | 8.22% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.32% | 18.30% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 15.39% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.39% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.08% |
| c. Funded percentage | 78% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.70% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.69% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.09% |
| 7. July 1, 2013 total pension rate, before adjustment | 17.32% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 9.19% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 9.19% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.32% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.00% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.00% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.32% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.00% | 9.96% |
| b. Tier 1/Tier 2 UAL rate | 9.19% | 8.22% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 17.32% | 18.30% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $12,077,948 | $397,151 | $12,475,099 |
| Tier 2 | 11,289,130 | 295,356 | 11,584,486 |
| Tier 1/Tier 2 valuation payroll | 23,367,078 | 692,507 | 24,059,585 |
| OPSRP valuation payroll | 7,959,297 | 1,994,071 | 9,953,368 |
| **Combined valuation payroll** | **$31,326,375** | **$2,686,578** | **$34,012,953** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 183 | 193 | 193 | 569 | 165 | 164 | 231 | 560 |
| Police & Fire | 5 | 5 | 32 | 42 | 48 | 52 | 27 | 127 |
| Total | 188 | 198 | 225 | 611 | 213 | 216 | 258 | 687 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 110 | 101 | N/A | 211 | 117 | 111 | N/A | 228 |
| Police & Fire | 26 | 14 | N/A | 40 | 29 | 15 | N/A | 44 |
| Total | 136 | 115 | N/A | 251 | 146 | 126 | N/A | 272 |
| **Dormant Members** | | | | | | | | |
| General Service | 78 | 79 | 9 | 166 | 74 | 67 | 8 | 149 |
| Police & Fire | 13 | 4 | 0 | 17 | 12 | 9 | 0 | 21 |
| Total | 91 | 83 | 9 | 183 | 86 | 76 | 8 | 170 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 400 | 33 | 1 | 434 | 396 | 26 | 0 | 422 |
| Police & Fire | 102 | 5 | 0 | 107 | 97 | 3 | 0 | 100 |
| Total | 502 | 38 | 1 | 541 | 493 | 29 | 0 | 522 |
| **Grand Total Number of Members** | **917** | **434** | **235** | **1,586** | **938** | **447** | **266** | **1,651** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | 1 | 1 | | | | | | | | **2** |
| **30-34** | | 11 | 6 | | | | | | | **17** |
| **35-39** | | 7 | 26 | 5 | | | | | | **38** |
| **40-44** | | 8 | 29 | 16 | 2 | | | | | **55** |
| **45-49** | | 7 | 23 | 22 | 16 | 1 | | | | **69** |
| **50-54** | | 3 | 16 | 12 | 13 | 6 | 1 | | | **51** |
| **55-59** | | 5 | 19 | 19 | 16 | 11 | 5 | 1 | | **76** |
| **60-64** | | 4 | 20 | 14 | 12 | 4 | 4 | 2 | | **60** |
| **65-69** | | 2 | 6 | 2 | 2 | 2 | 1 | | | **15** |
| **70-74** | | | | 1 | 1 | | | | | **2** |
| **75+** | | | | | 1 | | | | | **1** |
| **Total** | **1** | **48** | **145** | **91** | **63** | **24** | **11** | **3** | | **386** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

| Dormant Members | | | Retired Members and Beneficiaries | | |
|---|---|---|---|---|---|
| **Age** | **Count** | **Average Deferred Monthly Benefit** | **Age** | **Count** | **Average Monthly Benefit** |
| **0-20** | | | **0-45** | 1 | 2,270 |
| **20-24** | | | **45-49** | 4 | 2,327 |
| **25-29** | 1 | 218 | **50-54** | 9 | 1,255 |
| **30-34** | 6 | 42 | **55-59** | 48 | 1,872 |
| **35-39** | 16 | 613 | **60-64** | 104 | 1,234 |
| **40-44** | 14 | 571 | **65-69** | 128 | 1,269 |
| **45-49** | 27 | 991 | **70-74** | 101 | 1,228 |
| **50-54** | 40 | 964 | **75-79** | 63 | 918 |
| **55-59** | 34 | 672 | **80-84** | 39 | 1,218 |
| **60-64** | 23 | 1,090 | **85-89** | 24 | 1,034 |
| **65-69** | 8 | 961 | **90-94** | 16 | 956 |
| **70-74** | 1 | 2,214 | **95-99** | 2 | 446 |
| **75+** | 4 | 3,013 | **100+** | 1 | 793 |
| **Total** | 174 | 882 | **Total** | 540 | 1,249 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Malheur County/2039
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Malheur County/2039

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Malheur County -- #2039

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Malheur County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Malheur County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Malheur County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.49% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 3.41% | 3.41% | 3.41% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.05%** | **9.83%** | **12.56%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **14.64%** | **10.32%** | **13.05%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 88%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.90% | 13.90% |
| Minimum July 1, 2015 Rate | 10.90% | 7.90% |
| Maximum July 1, 2015 Rate | 16.90% | 19.90% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.54% | 2.69% | 2.69% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.16% | 3.67% | 3.67% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $32,795,320 | $29,753,207 | ($3,042,112) | 110% | $6,703,143 | (45%) |
| 12/31/2007 | 34,820,023 | 30,999,671 | (3,820,352) | 112% | 6,995,602 | (55%) |
| 12/31/2008 | 26,929,480 | 32,360,030 | 5,430,550 | 83% | 7,410,989 | 73% |
| 12/31/2009 | 30,796,030 | 34,090,448 | 3,294,418 | 90% | 7,381,830 | 45% |
| 12/31/2010 | 32,615,328 | 35,461,722 | 2,846,394 | 92% | 7,631,723 | 37% |
| 12/31/2011 | 32,516,737 | 37,111,809 | 4,595,072 | 88% | 7,459,213 | 62% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Malheur County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $4,595,072 | $2,846,394 |
| Allocated pooled OPSRP UAL | 127,272 | 94,757 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 4,722,344 | 2,941,151 |
| Combined valuation payroll | 7,459,213 | 7,631,723 |
| Net pension UAL as a percentage of payroll | 63% | 39% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $193,235 | $274,577 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $524,552 | $521,003 |
| Tier 1/Tier 2 valuation payroll | 4,998,362 | 5,166,201 |
| Tier 1/Tier 2 pension normal cost rate | 10.49% | 10.08% |
| Tier 1/ Tier 2 Actuarial accrued liability | $37,111,809 | $35,461,722 |
| Actuarial asset value | 32,516,737 | 32,615,328 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 4,595,072 | 2,846,394 |
| Tier 1/ Tier 2 Funded status | 88% | 92% |
| Combined valuation payroll | $7,459,213 | $7,631,723 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 62% | 37% |
| Tier 1/Tier 2 UAL rate | 3.41% | 2.63% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 107 | 113 |
| Tier 1/Tier 2 dormant members | 66 | 60 |
| Tier 1/Tier 2 retirees and beneficiaries | 151 | 145 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 7,459,213 | 7,631,723 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $6,618,727 | $6,594,773 |
| 2. Employer reserves | 16,732,761 | 16,498,173 |
| 3. Benefits in force reserve | 9,165,248 | 9,522,382 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$32,516,737** | **$32,615,328** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $32,615,328 |
| 2. | Regular employer contributions | 481,010 |
| 3. | Benefit payments and expenses | (1,535,574) |
| 4. | Adjustments [2] | (56,519) |
| 5. | Interest credited | 1,012,492 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$32,516,737** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $116,937 | $117,489 |
| Tier 1 General Service | 68,688 | 74,913 |
| Tier 2 Police & Fire | 140,325 | 134,817 |
| Tier 2 General Service | 198,602 | 193,784 |
| **Total** | **$524,552** | **$521,003** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $524,552 | $524,552 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $3,237,749 | $3,232,658 |
| ▪ Tier 1 General Service | 8,585,511 | 8,659,412 |
| ▪ Tier 2 Police & Fire | 1,804,016 | 1,617,014 |
| ▪ Tier 2 General Service | 2,748,449 | 2,544,461 |
| ▪ **Total Active Members** | **$16,375,725** | **$16,053,545** |
| Dormant Members | 4,066,916 | 3,729,075 |
| Retired Members and Beneficiaries | 16,669,168 | 15,679,102 |
| **Total Actuarial Accrued Liability** | **$37,111,809** | **$35,461,722** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $37,111,809 | $37,111,809 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $37,111,809 | $35,461,722 |
| 2. Actuarial value of assets | 32,516,737 | 32,615,328 |
| 3. Unfunded accrued liability *(1. – 2.)* | 4,595,072 | 2,846,394 |
| 4. Funded percentage *(2. ÷ 1.)* | 88% | 92% |
| 5. Combined valuation payroll | $7,459,213 | $7,631,723 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 62% | 37% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($4,457,759) | ($367,367) | ($340,983) | ($4,431,375) | ($381,143) |
| December 31, 2009 | $7,787,131 | $594,855 | $597,648 | $7,789,924 | $617,162 |
| December 31, 2011 | N/A | N/A | N/A | $1,236,523 | $91,317 |
| **Total** | | | | **$4,595,072** | **$327,336** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $35,461,722 |
| b. Normal cost at December 31, 2010 | 521,003 |
| c. Benefit payments during 2011 | (1,525,509) |
| d. Interest at 8.0% to December 31, 2011 | 2,817,598 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 37,274,814 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 37,274,814 |
| 2. Actuarial accrued liability at December 31, 2011 | 37,111,809 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 163,005 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 32,615,328 |
| b. Contributions for 2011[1] | 481,010 |
| c. Benefit payments and expenses during 2011 | (1,535,574) |
| d. Interest at 8.0% to December 31, 2011 | 2,567,044 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 34,127,808 |
| 5. Actuarial value of assets at December 31, 2011 | 32,516,737 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (1,611,071) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($1,448,066)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,846,394** |
| 2. Expected increase | 300,612 |
| 3. Liability (gain)/loss | (163,005) |
| 4. Asset (gain)/loss | 1,611,071 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$4,595,072** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $116,937 | $729,710 | 16.03% | $117,489 | $801,843 | 14.65% |
| Tier 1 General Service | 68,688 | 1,339,595 | 5.13% | 74,913 | 1,442,486 | 5.19% |
| Tier 2 Police & Fire | 140,325 | 905,023 | 15.51% | 134,817 | 893,209 | 15.09% |
| Tier 2 General Service | 198,602 | 2,024,034 | 9.81% | 193,784 | 2,028,663 | 9.55% |
| **Total** | **$524,552** | **$4,998,362** | **10.49%** | **$521,003** | **$5,166,201** | **10.08%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $4,595,072 | $2,846,394 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 327,336 | 191,820 |
| 3. Combined valuation payroll | 7,459,213 | 7,631,723 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.39% | 2.51% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.49% | 10.08% |
| b. Tier 1/Tier 2 UAL rate | 4.39% | 2.51% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 15.01% | 12.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 10.90% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.90% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.18% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 88% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.90% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.90% |
| 7. | July 1, 2013 total pension rate, before adjustment | 15.01% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.11%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.39% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.28% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.90% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.49% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.49% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.90% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.49% | 10.08% |
| b. Tier 1/Tier 2 UAL rate | 3.28% | 2.51% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 13.90% | 12.71% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $1,339,595 | $729,710 | $2,069,305 |
| Tier 2 | 2,024,034 | 905,023 | 2,929,057 |
| Tier 1/Tier 2 valuation payroll | 3,363,629 | 1,634,733 | 4,998,362 |
| OPSRP valuation payroll | 1,655,678 | 805,173 | 2,460,851 |
| **Combined valuation payroll** | **$5,019,307** | **$2,439,906** | **$7,459,213** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 29 | 50 | 46 | 125 | 31 | 53 | 55 | 139 |
| Police & Fire | 12 | 16 | 15 | 43 | 13 | 16 | 14 | 43 |
| Total | 41 | 66 | 61 | 168 | 44 | 69 | 69 | 182 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 26 | 12 | N/A | 38 | 35 | 17 | N/A | 52 |
| Police & Fire | 8 | 6 | N/A | 14 | 8 | 7 | N/A | 15 |
| Total | 34 | 18 | N/A | 52 | 43 | 24 | N/A | 67 |
| **Dormant Members** | | | | | | | | |
| General Service | 37 | 17 | 2 | 56 | 35 | 14 | 0 | 49 |
| Police & Fire | 6 | 6 | 1 | 13 | 6 | 5 | 1 | 12 |
| Total | 43 | 23 | 3 | 69 | 41 | 19 | 1 | 61 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 109 | 7 | 0 | 116 | 106 | 5 | 0 | 111 |
| Police & Fire | 32 | 3 | 0 | 35 | 33 | 1 | 0 | 34 |
| Total | 141 | 10 | 0 | 151 | 139 | 6 | 0 | 145 |
| **Grand Total Number of Members** | **259** | **117** | **64** | **440** | **267** | **118** | **70** | **455** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | 1 | | | | | | | 1 |
| 35-39 | | 7 | 8 | 2 | | | | | | 17 |
| 40-44 | | 5 | 6 | 4 | | | | | | 15 |
| 45-49 | | 6 | 6 | 6 | 2 | 1 | | | | 21 |
| 50-54 | | 3 | 8 | 5 | 2 | | | | | 18 |
| 55-59 | | 1 | 8 | 4 | 1 | | 3 | | | 17 |
| 60-64 | | 2 | | 3 | 3 | | | 1 | 1 | 10 |
| 65-69 | | | 1 | 2 | | 2 | | | | 5 |
| 70-74 | | | 2 | | | | | | | 2 |
| 75+ | | | 1 | | | | | | | 1 |
| **Total** | | **24** | **41** | **26** | **8** | **3** | **3** | **1** | **1** | **107** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 1 | 1,275 |
| 35-39 | 5 | 640 |
| 40-44 | 7 | 686 |
| 45-49 | 8 | 683 |
| 50-54 | 7 | 666 |
| 55-59 | 15 | 435 |
| 60-64 | 12 | 894 |
| 65-69 | 7 | 597 |
| 70-74 | 1 | 31 |
| 75+ | 3 | 50 |
| Total | 66 | 621 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 1 | 321 |
| 45-49 | | |
| 50-54 | 3 | 1,063 |
| 55-59 | 9 | 281 |
| 60-64 | 31 | 763 |
| 65-69 | 34 | 1,141 |
| 70-74 | 21 | 1,232 |
| 75-79 | 22 | 800 |
| 80-84 | 12 | 571 |
| 85-89 | 15 | 492 |
| 90-94 | 3 | 305 |
| 95-99 | | |
| 100+ | | |
| Total | 151 | 842 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Mapleton Water District/2597
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Mapleton Water District/2597

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Mapleton Water District/2597

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Mapleton Water District -- #2597

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Mapleton Water District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mapleton Water District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Mapleton Water District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.03% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.95% | 2.95% | 2.95% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **15.13%** | **9.37%** | **12.10%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.72%** | **9.86%** | **12.59%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 87%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.98% | 14.98% |
| Minimum July 1, 2015 Rate | 11.98% | 8.98% |
| Maximum July 1, 2015 Rate | 17.98% | 20.98% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 30 |
| Amortization factor | 12.617 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.10% | 3.19% | 3.19% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.98% | 2.95% | 2.95% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $137,916 | $140,474 | $2,558 | 98% | $38,324 | 7% |
| 12/31/2007 | 148,243 | 145,314 | (2,929) | 102% | 49,210 | (6%) |
| 12/31/2008 | 118,733 | 156,152 | 37,419 | 76% | 59,350 | 63% |
| 12/31/2009 | 138,450 | 170,867 | 32,417 | 81% | 60,927 | 53% |
| 12/31/2010 | 139,940 | 157,303 | 17,363 | 89% | 69,364 | 25% |
| 12/31/2011 | 147,113 | 169,350 | 22,237 | 87% | 62,272 | 36% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Mapleton Water District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $22,237 | $17,363 |
| Allocated pooled OPSRP UAL | 1,063 | 861 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 23,300 | 18,224 |
| Combined valuation payroll | 62,272 | 69,364 |
| Net pension UAL as a percentage of payroll | 37% | 26% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,613 | $2,496 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $6,102 | $5,648 |
| Tier 1/Tier 2 valuation payroll | 50,737 | 49,523 |
| Tier 1/Tier 2 pension normal cost rate | 12.03% | 11.40% |
| Tier 1/ Tier 2 Actuarial accrued liability | $169,350 | $157,303 |
| Actuarial asset value | 147,113 | 139,940 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 22,237 | 17,363 |
| Tier 1/ Tier 2 Funded status | 87% | 89% |
| Combined valuation payroll | $62,272 | $69,364 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 36% | 25% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 2.95% | 2.01% |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 62,272 | 69,364 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $40,692 | $38,151 |
| 2. Employer reserves | 82,051 | 74,432 |
| 3. Benefits in force reserve | 24,370 | 27,357 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$147,113** | **$139,940** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $139,940 |
| 2. Regular employer contributions | 5,878 |
| 3. Benefit payments and expenses | (4,083) |
| 4. Adjustments [2] | (30) |
| 5. Interest credited | 5,408 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$147,113** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 6,102 | 5,648 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$6,102** | **$5,648** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $6,102 | $6,102 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 125,028 | 112,259 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$125,028** | **$112,259** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 44,322 | 45,044 |
| **Total Actuarial Accrued Liability** | **$169,350** | **$157,303** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $169,350 | $169,350 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $169,350 | $157,303 |
| 2. Actuarial value of assets | 147,113 | 139,940 |
| 3. Unfunded accrued liability *(1. – 2.)* | 22,237 | 17,363 |
| 4. Funded percentage *(2. ÷ 1.)* | 87% | 89% |
| 5. Combined valuation payroll | $62,272 | $69,364 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 36% | 25% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($9,155) | ($753) | ($700) | ($9,102) | ($781) |
| December 31, 2009 | $41,720 | $3,187 | $3,202 | $41,735 | $3,307 |
| December 31, 2011 | N/A | N/A | N/A | ($10,396) | ($768) |
| **Total** | | | | **$22,237** | **$1,758** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $157,303 |
| b. Normal cost at December 31, 2010 | 5,648 |
| c. Benefit payments during 2011 | (4,056) |
| d. Interest at 8.0% to December 31, 2011 | 12,874 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 171,769 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 171,769 |
| 2. Actuarial accrued liability at December 31, 2011 | 169,350 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 2,419 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 139,940 |
| b. Contributions for 2011[1] | 5,878 |
| c. Benefit payments and expenses during 2011 | (4,083) |
| d. Interest at 8.0% to December 31, 2011 | 11,267 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 153,002 |
| 5. Actuarial value of assets at December 31, 2011 | 147,113 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (5,889) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($3,470)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$17,363** |
| 2. Expected increase | 1,404 |
| 3. Liability (gain)/loss | (2,419) |
| 4. Asset (gain)/loss | 5,889 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$22,237** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 6,102 | 50,737 | 12.03% | 5,648 | 49,523 | 11.40% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$6,102** | **$50,737** | **12.03%** | **$5,648** | **$49,523** | **11.40%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $22,237 | $17,363 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 1,758 | 1,311 |
| 3. Combined valuation payroll | 62,272 | 69,364 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.82% | 1.89% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.03% | 11.40% |
| b. Tier 1/Tier 2 UAL rate | 2.82% | 1.89% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.98% | 13.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 13.11% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.11% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.62% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 87% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.11% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.11% |
| 7. July 1, 2013 total pension rate, before adjustment | 14.98% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.82% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.82% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.98% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.03% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.03% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.98% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.03% | 11.40% |
| b. Tier 1/Tier 2 UAL rate | 2.82% | 1.89% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 14.98% | 13.41% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $50,737 | $0 | $50,737 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 50,737 | 0 | 50,737 |
| OPSRP valuation payroll | 11,535 | 0 | 11,535 |
| **Combined valuation payroll** | **$62,272** | **$0** | **$62,272** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 1 | 2 | 1 | 0 | 2 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 1 | 2 | 1 | 0 | 2 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **2** | **0** | **1** | **3** | **2** | **0** | **2** | **4** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | **1** | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | 1 | 510 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 1 | 510 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Millington Rural Fire Protection District/2782
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Millington Rural Fire Protection District/2782

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,


Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary


**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Millington Rural Fire Protection District -- #2782

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Millington Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Millington Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Millington Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 14.72% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (9.31%) | (9.31%) | (9.31%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **0.00%** | **0.00%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **0.49%** | **0.49%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 127%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 23 | 16 |
| Amortization factor | 14.715 | 11.834 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.48% | (7.07%) | (7.07%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (9.31%) | (9.31%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $198,681 | $130,583 | ($68,098) | 152% | $47,084 | (145%) |
| 12/31/2007 | 224,143 | 143,038 | (81,105) | 157% | 49,882 | (163%) |
| 12/31/2008 | 186,290 | 159,772 | (26,518) | 117% | 50,937 | (52%) |
| 12/31/2009 | 220,360 | 176,331 | (44,029) | 125% | 51,690 | (85%) |
| 12/31/2010 | 246,303 | 186,201 | (60,102) | 132% | 51,994 | (116%) |
| 12/31/2011 | 258,024 | 202,616 | (55,408) | 127% | 51,989 | (107%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Millington Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($55,408) | ($60,102) |
| Allocated pooled OPSRP UAL | 887 | 646 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (54,521) | (59,456) |
| Combined valuation payroll | 51,989 | 51,994 |
| Net pension UAL as a percentage of payroll | (105%) | (114%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,347 | $1,871 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $6,524 | $6,936 |
| Tier 1/Tier 2 valuation payroll | 51,989 | 51,994 |
| Tier 1/Tier 2 pension normal cost rate | 14.72% | 14.97% |
| Tier 1/ Tier 2 Actuarial accrued liability | $202,616 | $186,201 |
| Actuarial asset value | 258,024 | 246,303 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (55,408) | (60,102) |
| Tier 1/ Tier 2 Funded status | 127% | 132% |
| Combined valuation payroll | $51,989 | $51,994 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (107%) | (116%) |
| Tier 1/Tier 2 UAL rate | (9.31%) | (9.63%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 51,989 | 51,994 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $69,332 | $65,000 |
| 2. Employer reserves | 188,692 | 181,303 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$258,024** | **$246,303** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $246,303 |
| 2. | Regular employer contributions | 3,286 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | (976) |
| 5. | Interest credited | 9,411 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$258,024** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $6,524 | $6,936 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$6,524** | **$6,936** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $6,524 | $6,524 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $202,616 | $186,201 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$202,616** | **$186,201** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$202,616** | **$186,201** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $202,616 | $202,616 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $202,616 | $186,201 |
| 2. Actuarial value of assets | 258,024 | 246,303 |
| 3. Unfunded accrued liability *(1. – 2.)* | (55,408) | (60,102) |
| 4. Funded percentage *(2. ÷ 1.)* | 127% | 132% |
| 5. Combined valuation payroll | $51,989 | $51,994 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (107%) | (116%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($86,503) | ($7,128) | ($6,617) | ($85,992) | ($7,395) |
| December 31, 2009 | $42,827 | $3,271 | $3,287 | $42,843 | $3,394 |
| December 31, 2011 | N/A | N/A | N/A | ($12,259) | ($905) |
| **Total** | | | | **($55,408)** | **($4,906)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $186,201 |
| b. Normal cost at December 31, 2010 | 6,936 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 15,451 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 208,588 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 208,588 |
| 2. Actuarial accrued liability at December 31, 2011 | 202,616 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 5,972 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 246,303 |
| b. Contributions for 2011[1] | 3,286 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 19,836 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 269,425 |
| 5. Actuarial value of assets at December 31, 2011 | 258,024 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (11,401) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($5,429)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($60,102)** |
| 2. Expected increase | (735) |
| 3. Liability (gain)/loss | (5,972) |
| 4. Asset (gain)/loss | 11,401 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($55,408)** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $6,524 | $51,989 | 12.55% | $6,936 | $51,994 | 13.34% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$6,524** | **$51,989** | **12.55%** | **$6,936** | **$51,994** | **13.34%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($55,408) | ($60,102) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (4,906) | (5,070) |
| 3. Combined valuation payroll | 51,989 | 51,994 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (9.44%) | (9.75%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.55% | 13.34% |
| b. Tier 1/Tier 2 UAL rate | (9.44%) | (9.75%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 3.24% | 3.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 7.48% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.48% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.50% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 127% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 5.10% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.38% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 12.58% |
| 7. July 1, 2013 total pension rate, before adjustment | 3.24% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (9.44%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (9.44%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 3.24% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 2.17% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.55% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.72% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.72% | 14.97% |
| b. Tier 1/Tier 2 UAL rate | (9.44%) | (9.75%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 5.41% | 5.34% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $51,989 | $51,989 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 51,989 | 51,989 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$0** | **$51,989** | **$51,989** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **1** | **0** | **0** | **1** | **1** | **0** | **0** | **1** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | **1** | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Milton-Freewater Cemetery District #3/2708
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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September 28, 2012
Milton-Freewater Cemetery District #3/2708

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Milton-Freewater Cemetery District #3 -- #2708

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Milton-Freewater Cemetery District #3 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Milton-Freewater Cemetery District #3.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Milton-Freewater Cemetery District #3*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.16% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 25.64% | 25.64% | 25.64% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **37.95%** | **32.06%** | **34.79%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **38.54%** | **32.55%** | **35.28%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 48%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 37.80% | 37.80% |
| Minimum July 1, 2015 Rate | 30.24% | 22.68% |
| Maximum July 1, 2015 Rate | 45.36% | 52.92% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 25 | N/A |
| Amortization factor | 15.546 | N/A |



This work product was prepared solely for Oregon Public Employees Retirement System for the purposes stated herein, and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | N/A | N/A | N/A |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 37.80% | 25.64% | 25.64% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $63,926 | $0 | ($63,926) | 0% | $0 | 0% |
| 12/31/2007 | 69,982 | 0 | (69,982) | 0% | 0 | 0% |
| 12/31/2008 | 51,086 | 0 | (51,086) | 0% | 0 | 0% |
| 12/31/2009 | 60,844 | 0 | (60,844) | 0% | 0 | 0% |
| 12/31/2010 | 68,413 | 103,553 | 35,140 | 66% | 37,358 | 94% |
| 12/31/2011 | 75,406 | 158,314 | 82,908 | 48% | 20,879 | 397% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Milton-Freewater Cemetery District #3*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $82,908 | $35,140 |
| Allocated pooled OPSRP UAL | 356 | 464 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 83,264 | 35,604 |
| Combined valuation payroll | 20,879 | 37,358 |
| Net pension UAL as a percentage of payroll | 399% | 95% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $541 | $1,344 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $2,539 | $4,950 |
| Tier 1/Tier 2 valuation payroll | 20,879 | 36,830 |
| Tier 1/Tier 2 pension normal cost rate | 12.16% | 13.44% |
| Tier 1/ Tier 2 Actuarial accrued liability | $158,314 | $103,553 |
| Actuarial asset value | 75,406 | 68,413 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 82,908 | 35,140 |
| Tier 1/ Tier 2 Funded status | 48% | 66% |
| Combined valuation payroll | $20,879 | $37,358 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 397% | 94% |
| Tier 1/Tier 2 UAL rate | 25.64% | 5.52% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 20,879 | 37,358 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $11,781 | $0 |
| 2. Employer reserves | 63,625 | 68,413 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$75,406** | **$68,413** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $68,413 |
| 2. | Regular employer contributions | (6,181) |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | 11,548 |
| 5. | Interest credited | 1,626 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$75,406** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 4,868 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 2,539 | 82 |
| **Total** | **$2,539** | **$4,950** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $2,539 | $2,539 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 76,662 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 21,111 | 26,891 |
| ▪ **Total Active Members** | **$21,111** | **$103,553** |
| Dormant Members | 137,203 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$158,314** | **$103,553** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $158,314 | $158,314 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $158,314 | $103,553 |
| 2. Actuarial value of assets | 75,406 | 68,413 |
| 3. Unfunded accrued liability *(1. – 2.)* | 82,908 | 35,140 |
| 4. Funded percentage *(2. ÷ 1.)* | 48% | 66% |
| 5. Combined valuation payroll | $20,879 | $37,358 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 397% | 94% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($70,036) | ($5,772) | ($5,357) | ($69,621) | ($5,988) |
| December 31, 2009 | $9,402 | $718 | $722 | $9,406 | $745 |
| December 31, 2011 | N/A | N/A | N/A | $143,123 | $10,570 |
| **Total** | | | | **$82,908** | **$5,327** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $103,553 |
| b. Normal cost at December 31, 2010 | 4,950 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 8,680 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 117,183 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 117,183 |
| 2. Actuarial accrued liability at December 31, 2011 | 158,314 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (41,131) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 68,413 |
| b. Contributions for 2011[1] | (6,181) |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 5,226 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 67,458 |
| 5. Actuarial value of assets at December 31, 2011 | 75,406 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | 7,948 |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($33,183)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$35,140** |
| 2. Expected increase | 14,585 |
| 3. Liability (gain)/loss | 41,131 |
| 4. Asset (gain)/loss | (7,948) |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$82,908** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 4,868 | 36,145 | 13.47% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 2,539 | 20,879 | 12.16% | 82 | 685 | 11.97% |
| **Total** | **$2,539** | **$20,879** | **12.16%** | **$4,950** | **$36,830** | **13.44%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $82,908 | $35,140 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 5,327 | 2,019 |
| 3. Combined valuation payroll | 20,879 | 37,358 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 25.51% | 5.40% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.16% | 13.44% |
| b. Tier 1/Tier 2 UAL rate | 25.51% | 5.40% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 37.80% | 18.96% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 37.80% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 37.80% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | N/A |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | N/A |
| c. Funded percentage | N/A |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | N/A |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | N/A |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | N/A |
| 7. July 1, 2013 total pension rate, before adjustment | N/A |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | N/A |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | N/A |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | N/A |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | N/A |
| 12. Tier 1/Tier 2 retiree healthcare rate | N/A |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | N/A |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | N/A |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | N/A |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | N/A |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.16% | 13.44% |
| b. Tier 1/Tier 2 UAL rate | 25.51% | 5.40% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 37.80% | 18.96% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 20,879 | 0 | 20,879 |
| Tier 1/Tier 2 valuation payroll | 20,879 | 0 | 20,879 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$20,879** | **$0** | **$20,879** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 1 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **2** | **0** | **2** | **1** | **1** | **2** | **4** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | 1 | | | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 1,058 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 1,058 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Mosier Fire District/2873
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Mosier Fire District/2873

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Mosier Fire District -- #2873

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Mosier Fire District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mosier Fire District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Mosier Fire District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.82% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.13% | 0.13% | 0.13% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.10%** | **6.55%** | **9.28%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **11.69%** | **7.04%** | **9.77%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 0%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.95% | 10.95% |
| Minimum July 1, 2015 Rate | 7.95% | 4.95% |
| Maximum July 1, 2015 Rate | 13.95% | 16.95% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 16 | N/A |
| Amortization factor | 11.626 | N/A |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | N/A | N/A | N/A |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.95% | 0.13% | 0.13% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $0 | $0 | $0 | 0% | $0 | 0% |
| 12/31/2007 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2008 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2009 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2010 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2011 | 0 | 0 | 0 | 0% | 36,000 | 0% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Mosier Fire District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $0 | $0 |
| Allocated pooled OPSRP UAL | 614 | 0 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 614 | 0 |
| Combined valuation payroll | 36,000 | 0 |
| Net pension UAL as a percentage of payroll | 2% | 0% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $933 | $0 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $0 | $0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 10.82% | 0.00% |
| Tier 1/ Tier 2 Actuarial accrued liability | $0 | $0 |
| Actuarial asset value | 0 | 0 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 0 | 0 |
| Tier 1/ Tier 2 Funded status | 0% | 0% |
| Combined valuation payroll | $36,000 | $0 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 0% | 0% |
| Tier 1/Tier 2 UAL rate | 0.13% | 0.00% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### OPSRP

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### Retiree Healthcare

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 36,000 | 0 |
| 3. Amortization factor | 11.626 | 0.000 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $0 | $0 |
| 2. Employer reserves | 0 | 0 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$0** | **$0** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $0 |
| 2. | Regular employer contributions | 0 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | 0 |
| 5. | Interest credited | 0 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$0** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$0** | **$0** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $0 | $0 |
| 2. Actuarial value of assets | 0 | 0 |
| 3. Unfunded accrued liability *(1. – 2.)* | 0 | 0 |
| 4. Funded percentage *(2. ÷ 1.)* | 0% | 0% |
| 5. Combined valuation payroll | $36,000 | $0 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 0% | 0% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $0 | $0 | $0 | $0 | $0 |
| December 31, 2009 | $0 | $0 | $0 | $0 | $0 |
| December 31, 2011 | N/A | N/A | N/A | $0 | $0 |
| **Total** | | | | **$0** | **$0** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $0 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 0 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 0 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 0 |
| 2. Actuarial accrued liability at December 31, 2011 | 0 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 0 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 0 |
| b. Contributions for 2011[1] | 0 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 0 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 0 |
| 5. Actuarial value of assets at December 31, 2011 | 0 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | 0 |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **$0** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$0** |
| 2. Expected increase | 0 |
| 3. Liability (gain)/loss | 0 |
| 4. Asset (gain)/loss | 0 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$0** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$0** | **$0** | **10.82%** | **$0** | **$0** | **0.00%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $0 | $0 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 0 | 0 |
| 3. Combined valuation payroll | 36,000 | 0 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.00% | 0.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | N/A |
| b. Tier 1/Tier 2 UAL rate | 0.00% | N/A |
| c. Multnomah Fire District #10 rate | 0.13% | N/A |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.95% | N/A |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.95% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.95% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | N/A |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | N/A |
| c. Funded percentage | N/A |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | N/A |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | N/A |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | N/A |
| 7. July 1, 2013 total pension rate, before adjustment | N/A |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | N/A |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | N/A |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | N/A |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | N/A |
| 12. Tier 1/Tier 2 retiree healthcare rate | N/A |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | N/A |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | N/A |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | N/A |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | N/A |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | N/A |
| b. Tier 1/Tier 2 UAL rate | 0.00% | N/A |
| c. Multnomah Fire District #10 rate | 0.13% | N/A |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 10.95% | N/A |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 | 0 |
| OPSRP valuation payroll | 0 | 36,000 | 36,000 |
| **Combined valuation payroll** | **$0** | **$36,000** | **$36,000** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **0** | **1** | **1** | **0** | **0** | **0** | **0** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Mt Angel Fire District/2861
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Mt Angel Fire District/2861

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Mt Angel Fire District/2861

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

Mt Angel Fire District -- #2861

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Mt Angel Fire District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Mt Angel Fire District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Mt Angel Fire District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 10.82% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.18%) | (2.18%) | (2.18%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.79%** | **4.24%** | **6.97%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **9.38%** | **4.73%** | **7.46%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 100%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.64% | 8.64% |
| Minimum July 1, 2015 Rate | 5.64% | 2.64% |
| Maximum July 1, 2015 Rate | 11.64% | 14.64% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 15 | 17 |
| Amortization factor | 11.137 | 12.375 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.54% | (2.60%) | (2.60%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.64% | (2.18%) | (2.18%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $7,494 | $1,872 | ($5,622) | 400% | $33,855 | (17%) |
| 12/31/2007 | 9,499 | 0 | (9,499) | 0% | 17,494 | (54%) |
| 12/31/2008 | 6,893 | 0 | (6,893) | 0% | 20,344 | (34%) |
| 12/31/2009 | 7,169 | 0 | (7,169) | 0% | 21,279 | (34%) |
| 12/31/2010 | 7,032 | 0 | (7,032) | 0% | 24,423 | (29%) |
| 12/31/2011 | 6,360 | 0 | (6,360) | 100% | 24,660 | (26%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Mt Angel Fire District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($6,360) | ($7,032) |
| Allocated pooled OPSRP UAL | 421 | 303 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (5,939) | (6,729) |
| Combined valuation payroll | 24,660 | 24,423 |
| Net pension UAL as a percentage of payroll | (24%) | (28%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $639 | $879 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $0 | $0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| Tier 1/ Tier 2 Actuarial accrued liability | $0 | $0 |
| Actuarial asset value | 6,360 | 7,032 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (6,360) | (7,032) |
| Tier 1/ Tier 2 Funded status | 0% | 0% |
| Combined valuation payroll | $24,660 | $24,423 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (26%) | (29%) |
| Tier 1/Tier 2 UAL rate | (2.18%) | (2.30%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 24,660 | 24,423 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $0 | $0 |
| 2. Employer reserves | 6,360 | 7,032 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$6,360** | **$7,032** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $7,032 |
| 2. | Regular employer contributions | (757) |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | (55) |
| 5. | Interest credited | 140 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$6,360** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$0** | **$0** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $0 | $0 |
| 2. Actuarial value of assets | 6,360 | 7,032 |
| 3. Unfunded accrued liability *(1. – 2.)* | (6,360) | (7,032) |
| 4. Funded percentage *(2. ÷ 1.)* | 100% | 0% |
| 5. Combined valuation payroll | $24,660 | $24,423 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (26%) | (29%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($9,508) | ($782) | ($727) | ($9,453) | ($811) |
| December 31, 2009 | $2,370 | $182 | $182 | $2,370 | $189 |
| December 31, 2011 | N/A | N/A | N/A | $723 | $53 |
| **Total** | | | | **($6,360)** | **($569)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $0 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 0 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 0 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 0 |
| 2. Actuarial accrued liability at December 31, 2011 | 0 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 0 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 7,032 |
| b. Contributions for 2011[1] | (757) |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 532 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 6,807 |
| 5. Actuarial value of assets at December 31, 2011 | 6,360 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (448) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($448)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($7,032)** |
| 2. Expected increase | 224 |
| 3. Liability (gain)/loss | 0 |
| 4. Asset (gain)/loss | 448 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($6,360)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$0** | **$0** | **10.82%** | **$0** | **$0** | **10.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($6,360) | ($7,032) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (569) | (592) |
| 3. Combined valuation payroll | 24,660 | 24,423 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.31%) | (2.42%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | (2.31%) | (2.42%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 8.64% | 8.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 7.54% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.54% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.51% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 100% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.54% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 10.54% |
| 7. July 1, 2013 total pension rate, before adjustment | 8.64% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.31%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.31%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.64% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.82% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.82% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.64% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | (2.31%) | (2.42%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 8.64% | 8.00% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 | 0 |
| OPSRP valuation payroll | 24,660 | 0 | 24,660 |
| **Combined valuation payroll** | **$24,660** | **$0** | **$24,660** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **0** | **1** | **1** | **0** | **0** | **1** | **1** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Nehalem Bay Wastewater Agency/2724
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Nehalem Bay Wastewater Agency/2724

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Nehalem Bay Wastewater Agency/2724

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Nehalem Bay Wastewater Agency -- #2724

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Nehalem Bay Wastewater Agency to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Nehalem Bay Wastewater Agency.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Nehalem Bay Wastewater Agency*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 0.11% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.33% | 5.33% | 5.33% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.59%** | **11.75%** | **14.48%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.18%** | **12.24%** | **14.97%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 88%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.44% | 5.44% |
| Minimum July 1, 2015 Rate | 2.44% | 0.00% |
| Maximum July 1, 2015 Rate | 8.44% | 11.44% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 17 | 10 |
| Amortization factor | 12.125 | 7.791 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.44% | 4.90% | 4.90% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.44% | 5.33% | 5.33% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,408,760 | $1,286,749 | ($122,011) | 109% | $239,755 | (51%) |
| 12/31/2007 | 1,601,701 | 1,370,160 | (231,541) | 117% | 256,029 | (90%) |
| 12/31/2008 | 1,255,664 | 1,442,024 | 186,360 | 87% | 164,832 | 113% |
| 12/31/2009 | 1,330,230 | 1,423,510 | 93,280 | 93% | 254,429 | 37% |
| 12/31/2010 | 1,376,367 | 1,506,536 | 130,169 | 91% | 243,310 | 54% |
| 12/31/2011 | 1,373,769 | 1,556,184 | 182,415 | 88% | 289,012 | 63% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Nehalem Bay Wastewater Agency*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $182,415 | $130,169 |
| Allocated pooled OPSRP UAL | 4,931 | 3,021 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 187,346 | 133,190 |
| Combined valuation payroll | 289,012 | 243,310 |
| Net pension UAL as a percentage of payroll | 65% | 55% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $7,487 | $8,754 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $130 | $105 |
| Tier 1/Tier 2 valuation payroll | 119,460 | 111,137 |
| Tier 1/Tier 2 pension normal cost rate | 0.11% | 0.09% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,556,184 | $1,506,536 |
| Actuarial asset value | 1,373,769 | 1,376,367 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 182,415 | 130,169 |
| Tier 1/ Tier 2 Funded status | 88% | 91% |
| Combined valuation payroll | $289,012 | $243,310 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 63% | 54% |
| Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10) | 5.33% | 5.35% |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 5 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 289,012 | 243,310 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $199,377 | $192,785 |
| 2. Employer reserves | 618,298 | 581,426 |
| 3. Benefits in force reserve | 556,094 | 602,156 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,373,769** | **$1,376,367** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,376,367 |
| 2. Regular employer contributions | 23,546 |
| 3. Benefit payments and expenses | (93,170) |
| 4. Adjustments [2] | 32,861 |
| 5. Interest credited | 34,165 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,373,769** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 130 | 105 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$130** | **$105** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $130 | $130 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 544,795 | 515,055 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$544,795** | **$515,055** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 1,011,389 | 991,481 |
| **Total Actuarial Accrued Liability** | **$1,556,184** | **$1,506,536** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,556,184 | $1,556,184 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,556,184 | $1,506,536 |
| 2. Actuarial value of assets | 1,373,769 | 1,376,367 |
| 3. Unfunded accrued liability *(1. – 2.)* | 182,415 | 130,169 |
| 4. Funded percentage *(2. ÷ 1.)* | 88% | 91% |
| 5. Combined valuation payroll | $289,012 | $243,310 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 63% | 54% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($394,071) | ($32,475) | ($30,143) | ($391,739) | ($33,693) |
| December 31, 2009 | $489,845 | $37,420 | $37,595 | $490,020 | $38,823 |
| December 31, 2011 | N/A | N/A | N/A | $84,134 | $6,213 |
| **Total** | | | | **$182,415** | **$11,343** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,506,536 |
| b. Normal cost at December 31, 2010 | 105 |
| c. Benefit payments during 2011 | (92,559) |
| d. Interest at 8.0% to December 31, 2011 | 116,829 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,530,911 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,530,911 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,556,184 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (25,273) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,376,367 |
| b. Contributions for 2011[1] | 23,546 |
| c. Benefit payments and expenses during 2011 | (93,170) |
| d. Interest at 8.0% to December 31, 2011 | 107,324 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,414,068 |
| 5. Actuarial value of assets at December 31, 2011 | 1,373,769 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (40,299) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($65,572)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$130,169** |
| 2. Expected increase | (13,326) |
| 3. Liability (gain)/loss | 25,273 |
| 4. Asset (gain)/loss | 40,299 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$182,415** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 130 | 119,460 | 0.11% | 105 | 111,137 | 0.09% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$130** | **$119,460** | **0.11%** | **$105** | **$111,137** | **0.09%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $182,415 | $130,169 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 11,343 | 7,485 |
| 3. Combined valuation payroll | 289,012 | 243,310 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.92% | 3.08% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 0.11% | 0.09% |
| b. Tier 1/Tier 2 UAL rate | 3.92% | 3.08% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 4.16% | 3.29% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.44% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.44% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.69% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 88% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.44% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.44% |
| 7. July 1, 2013 total pension rate, before adjustment | 4.16% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 1.28% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.92% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.20% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 5.44% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 0.11% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 0.11% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.44% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 0.11% | 0.09% |
| b. Tier 1/Tier 2 UAL rate | 5.20% | 5.23% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 5.44% | 5.44% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $119,460 | $0 | $119,460 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 119,460 | 0 | 119,460 |
| OPSRP valuation payroll | 169,552 | 0 | 169,552 |
| **Combined valuation payroll** | **$289,012** | **$0** | **$289,012** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 0 | 4 | 6 | 2 | 0 | 3 | 5 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 4 | 6 | 2 | 0 | 3 | 5 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 0 | 0 | 5 | 5 | 0 | 0 | 5 |
| **Grand Total Number of Members** | **7** | **0** | **4** | **11** | **7** | **0** | **3** | **10** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | 1 | | | | | **1** |
| **50-54** | | | | | 1 | | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | | **2** | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 1,607 |
| 60-64 | 2 | 1,701 |
| 65-69 | 2 | 679 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 5 | 1,273 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Neskowin Regional Sanitary Authority/2740
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Neskowin Regional Sanitary Authority/2740

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Neskowin Regional Sanitary Authority/2740

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On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Neskowin Regional Sanitary Authority -- #2740

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Neskowin Regional Sanitary Authority to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Neskowin Regional Sanitary Authority.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Neskowin Regional Sanitary Authority*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.45% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.55%) | (2.55%) | (2.55%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **10.05%** | **3.87%** | **6.60%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.64%** | **4.36%** | **7.09%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 134%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 9.90% | 9.90% |
| Minimum July 1, 2015 Rate | 6.90% | 3.90% |
| Maximum July 1, 2015 Rate | 12.90% | 15.90% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 14 | 16 |
| Amortization factor | 10.268 | 11.419 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.74% | (2.53%) | (2.53%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.90% | (2.55%) | (2.55%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $180,229 | $93,982 | ($86,247) | 192% | $91,043 | (95%) |
| 12/31/2007 | 201,719 | 98,317 | (103,402) | 205% | 169,763 | (61%) |
| 12/31/2008 | 164,759 | 111,962 | (52,797) | 147% | 145,101 | (36%) |
| 12/31/2009 | 162,588 | 112,598 | (49,990) | 144% | 164,413 | (30%) |
| 12/31/2010 | 183,374 | 129,211 | (54,163) | 142% | 167,047 | (32%) |
| 12/31/2011 | 188,492 | 141,097 | (47,395) | 134% | 171,129 | (28%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Neskowin Regional Sanitary Authority*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($47,395) | ($54,163) |
| Allocated pooled OPSRP UAL | 2,920 | 2,074 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (44,475) | (52,089) |
| Combined valuation payroll | 171,129 | 167,047 |
| Net pension UAL as a percentage of payroll | (26%) | (31%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $4,433 | $6,010 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $6,201 | $6,141 |
| Tier 1/Tier 2 valuation payroll | 49,808 | 50,203 |
| Tier 1/Tier 2 pension normal cost rate | 12.45% | 12.23% |
| Tier 1/ Tier 2 Actuarial accrued liability | $141,097 | $129,211 |
| Actuarial asset value | 188,492 | 183,374 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (47,395) | (54,163) |
| Tier 1/ Tier 2 Funded status | 134% | 142% |
| Combined valuation payroll | $171,129 | $167,047 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (28%) | (32%) |
| Tier 1/Tier 2 UAL rate | (2.55%) | (2.79%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 2 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 171,129 | 167,047 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $16,409 | $15,575 |
| 2. Employer reserves | 157,399 | 151,641 |
| 3. Benefits in force reserve | 14,685 | 16,158 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$188,492** | **$183,374** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $183,374 |
| 2. | Regular employer contributions | 2,464 |
| 3. | Benefit payments and expenses | (2,460) |
| 4. | Adjustments[2] | 509 |
| 5. | Interest credited | 4,606 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$188,492** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 6,201 | 6,141 |
| **Total** | **$6,201** | **$6,141** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $6,201 | $6,201 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 62,484 | 54,930 |
| ▪ **Total Active Members** | **$62,484** | **$54,930** |
| Dormant Members | 51,905 | 47,677 |
| Retired Members and Beneficiaries | 26,708 | 26,604 |
| **Total Actuarial Accrued Liability** | **$141,097** | **$129,211** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $141,097 | $141,097 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $141,097 | $129,211 |
| 2. Actuarial value of assets | 188,492 | 183,374 |
| 3. Unfunded accrued liability *(1. – 2.)* | (47,395) | (54,163) |
| 4. Funded percentage *(2. ÷ 1.)* | 134% | 142% |
| 5. Combined valuation payroll | $171,129 | $167,047 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (28%) | (32%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($121,985) | ($10,053) | ($9,331) | ($121,263) | ($10,430) |
| December 31, 2009 | $72,531 | $5,540 | $5,567 | $72,558 | $5,748 |
| December 31, 2011 | N/A | N/A | N/A | $1,310 | $97 |
| **Total** | | | | **($47,395)** | **($4,585)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $129,211 |
| b. Normal cost at December 31, 2010 | 6,141 |
| c. Benefit payments during 2011 | (2,444) |
| d. Interest at 8.0% to December 31, 2011 | 10,730 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 143,638 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 143,638 |
| 2. Actuarial accrued liability at December 31, 2011 | 141,097 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 2,541 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 183,374 |
| b. Contributions for 2011[1] | 2,464 |
| c. Benefit payments and expenses during 2011 | (2,460) |
| d. Interest at 8.0% to December 31, 2011 | 14,670 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 198,047 |
| 5. Actuarial value of assets at December 31, 2011 | 188,492 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (9,555) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($7,014)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($54,163)** |
| 2. Expected increase | (246) |
| 3. Liability (gain)/loss | (2,541) |
| 4. Asset (gain)/loss | 9,555 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($47,395)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 6,201 | 49,808 | 12.45% | 6,141 | 50,203 | 12.23% |
| **Total** | **$6,201** | **$49,808** | **12.45%** | **$6,141** | **$50,203** | **12.23%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($47,395) | ($54,163) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (4,585) | (4,861) |
| 3. Combined valuation payroll | 171,129 | 167,047 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.68%) | (2.91%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.45% | 12.23% |
| b. Tier 1/Tier 2 UAL rate | (2.68%) | (2.91%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 9.90% | 9.44% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 9.74% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.74% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.95% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 134% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 3.74% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 15.74% |
| 7. July 1, 2013 total pension rate, before adjustment | 9.90% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.68%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.68%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 9.90% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.45% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.45% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 9.90% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.45% | 12.23% |
| b. Tier 1/Tier 2 UAL rate | (2.68%) | (2.91%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 9.90% | 9.44% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 49,808 | 0 | 49,808 |
| Tier 1/Tier 2 valuation payroll | 49,808 | 0 | 49,808 |
| OPSRP valuation payroll | 121,321 | 0 | 121,321 |
| **Combined valuation payroll** | **$171,129** | **$0** | **$171,129** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 3 | 4 | 0 | 1 | 3 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 3 | 4 | 0 | 1 | 3 | 4 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| **Grand Total Number of Members** | **3** | **2** | **3** | **8** | **3** | **2** | **3** | **8** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | 1 | | | | | | | | **1** |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **1** | | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 198 |
| 60-64 | | |
| 65-69 | 1 | 205 |
| 70-74 | | |
| 75+ | | |
| **Total** | 2 | 202 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 136 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | 1 | 42 |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 2 | 89 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

North Clackamas County Water Commission/2835
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
North Clackamas County Water Commission/2835

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### North Clackamas County Water Commission -- #2835

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for North Clackamas County Water Commission to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to North Clackamas County Water Commission.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for North Clackamas County Water Commission*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.02% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.41% | 2.41% | 2.41% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **9.58%** | **8.83%** | **11.56%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.17%** | **9.32%** | **12.05%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 9.43% | 9.43% |
| Minimum July 1, 2015 Rate | 6.43% | 3.43% |
| Maximum July 1, 2015 Rate | 12.43% | 15.43% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 22 | 27 |
| Amortization factor | 14.334 | 16.203 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.99% | 0.59% | 0.59% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.43% | 2.41% | 2.41% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $164,155 | $108,391 | ($55,765) | 151% | $191,206 | (29%) |
| 12/31/2007 | 190,419 | 123,836 | (66,583) | 154% | 153,562 | (43%) |
| 12/31/2008 | 160,095 | 192,244 | 32,149 | 83% | 288,572 | 11% |
| 12/31/2009 | 207,219 | 235,186 | 27,967 | 88% | 347,628 | 8% |
| 12/31/2010 | 246,229 | 297,902 | 51,673 | 83% | 277,048 | 19% |
| 12/31/2011 | 267,657 | 344,501 | 76,844 | 78% | 232,626 | 33% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *North Clackamas County Water Commission*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $76,844 | $51,673 |
| Allocated pooled OPSRP UAL | 3,969 | 3,440 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 80,813 | 55,113 |
| Combined valuation payroll | 232,626 | 277,048 |
| Net pension UAL as a percentage of payroll | 35% | 20% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $6,026 | $9,968 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $16,335 | $16,322 |
| Tier 1/Tier 2 valuation payroll | 232,626 | 257,065 |
| Tier 1/Tier 2 pension normal cost rate | 7.02% | 6.35% |
| Tier 1/ Tier 2 Actuarial accrued liability | $344,501 | $297,902 |
| Actuarial asset value | 267,657 | 246,229 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 76,844 | 51,673 |
| Tier 1/ Tier 2 Funded status | 78% | 83% |
| Combined valuation payroll | $232,626 | $277,048 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 33% | 19% |
| Tier 1/Tier 2 UAL rate (includes Multnomah Fire District #10) | 2.41% | 1.35% |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 232,626 | 277,048 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $62,714 | $59,567 |
| 2. Employer reserves | 204,943 | 186,662 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$267,657** | **$246,229** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $246,229 |
| 2. Regular employer contributions | 13,992 |
| 3. Benefit payments and expenses | 0 |
| 4. Adjustments[2] | (348) |
| 5. Interest credited | 7,784 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$267,657** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 6,095 | 4,565 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 10,240 | 11,757 |
| **Total** | **$16,335** | **$16,322** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $16,335 | $16,335 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 185,000 | 155,515 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 137,293 | 121,925 |
| ▪ **Total Active Members** | **$322,293** | **$277,440** |
| Dormant Members | 22,208 | 20,462 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$344,501** | **$297,902** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $344,501 | $344,501 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $344,501 | $297,902 |
| 2. Actuarial value of assets | 267,657 | 246,229 |
| 3. Unfunded accrued liability *(1. – 2.)* | 76,844 | 51,673 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 83% |
| 5. Combined valuation payroll | $232,626 | $277,048 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 33% | 19% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($77,898) | ($6,421) | ($5,959) | ($77,436) | ($6,662) |
| December 31, 2009 | $106,388 | $8,127 | $8,165 | $106,426 | $8,432 |
| December 31, 2011 | N/A | N/A | N/A | $47,854 | $3,534 |
| **Total** | | | | **$76,844** | **$5,304** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $297,902 |
| b. Normal cost at December 31, 2010 | 16,322 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 25,138 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 339,362 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 339,362 |
| 2. Actuarial accrued liability at December 31, 2011 | 344,501 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (5,139) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 246,229 |
| b. Contributions for 2011[1] | 13,992 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 20,258 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 280,478 |
| 5. Actuarial value of assets at December 31, 2011 | 267,657 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (12,822) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($17,961)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$51,673** |
| 2. Expected increase | 7,210 |
| 3. Liability (gain)/loss | 5,139 |
| 4. Asset (gain)/loss | 12,822 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$76,844** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 6,095 | 146,267 | 4.17% | 4,565 | 144,405 | 3.16% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 10,240 | 86,359 | 11.86% | 11,757 | 112,660 | 10.44% |
| **Total** | **$16,335** | **$232,626** | **7.02%** | **$16,322** | **$257,065** | **6.35%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $76,844 | $51,673 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 5,304 | 3,418 |
| 3. Combined valuation payroll | 232,626 | 277,048 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.28% | 1.23% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.02% | 6.35% |
| b. Tier 1/Tier 2 UAL rate | 2.28% | 1.23% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 9.43% | 7.70% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 6.99% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 6.99% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.40% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 78% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.60% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 3.39% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 10.59% |
| 7. July 1, 2013 total pension rate, before adjustment | 9.43% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.28% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 2.28% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 9.43% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.02% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.02% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 9.43% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.02% | 6.35% |
| b. Tier 1/Tier 2 UAL rate | 2.28% | 1.23% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 9.43% | 7.70% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $146,267 | $0 | $146,267 |
| Tier 2 | 86,359 | 0 | 86,359 |
| Tier 1/Tier 2 valuation payroll | 232,626 | 0 | 232,626 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$232,626** | **$0** | **$232,626** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 1 | 0 | 3 | 2 | 1 | 0 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **3** | **2** | **0** | **5** | **3** | **2** | **0** | **5** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | 1 | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | 1 | | | 1 | | | | **2** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | | **1** | **1** | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | 1 | 279 |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 279 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Northeast Oregon Housing Authority/2637
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Northeast Oregon Housing Authority/2637

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Northeast Oregon Housing Authority -- #2637

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Northeast Oregon Housing Authority to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Northeast Oregon Housing Authority.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Northeast Oregon Housing Authority*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.49% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.08% | 2.08% | 2.08% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **9.72%** | **8.50%** | **11.23%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **10.31%** | **8.99%** | **11.72%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 83%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 9.57% | 9.57% |
| Minimum July 1, 2015 Rate | 6.57% | 3.57% |
| Maximum July 1, 2015 Rate | 12.57% | 15.57% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.73% | 0.90% | 0.90% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.41% | 4.92% | 4.92% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $2,603,003 | $2,248,147 | ($354,856) | 116% | $728,629 | (49%) |
| 12/31/2007 | 2,897,572 | 2,474,079 | (423,493) | 117% | 689,746 | (61%) |
| 12/31/2008 | 2,378,561 | 2,656,235 | 277,674 | 90% | 672,380 | 41% |
| 12/31/2009 | 2,762,649 | 2,872,484 | 109,835 | 96% | 784,113 | 14% |
| 12/31/2010 | 3,078,550 | 3,121,528 | 42,978 | 99% | 816,864 | 5% |
| 12/31/2011 | 2,794,568 | 3,360,981 | 566,413 | 83% | 683,194 | 83% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Northeast Oregon Housing Authority*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $566,413 | $42,978 |
| Allocated pooled OPSRP UAL | 11,657 | 10,142 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 578,070 | 53,120 |
| Combined valuation payroll | 683,194 | 816,864 |
| Net pension UAL as a percentage of payroll | 85% | 7% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $17,698 | $29,389 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $38,679 | $38,497 |
| Tier 1/Tier 2 valuation payroll | 516,749 | 614,013 |
| Tier 1/Tier 2 pension normal cost rate | 7.49% | 6.27% |
| Tier 1/ Tier 2 Actuarial accrued liability | $3,360,981 | $3,121,528 |
| Actuarial asset value | 2,794,568 | 3,078,550 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 566,413 | 42,978 |
| Tier 1/ Tier 2 Funded status | 83% | 99% |
| Combined valuation payroll | $683,194 | $816,864 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 83% | 5% |
| Tier 1/Tier 2 UAL rate | 2.08% | 0.10% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 13 | 13 |
| Tier 1/Tier 2 dormant members | 4 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 683,194 | 816,864 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $750,045 | $1,096,368 |
| 2. Employer reserves | 1,556,457 | 1,914,129 |
| 3. Benefits in force reserve | 488,066 | 68,053 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$2,794,568** | **$3,078,550** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $3,078,550 |
| 2. Regular employer contributions | 45,419 |
| 3. Benefit payments and expenses | (81,772) |
| 4. Adjustments[2] | (357,949) |
| 5. Interest credited | 110,321 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,794,568** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 16,778 | 16,735 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 21,901 | 21,762 |
| **Total** | **$38,679** | **$38,497** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $38,679 | $38,679 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 1,685,868 | 2,541,384 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 258,307 | 230,749 |
| ▪ **Total Active Members** | **$1,944,175** | **$2,772,133** |
| Dormant Members | 529,143 | 237,342 |
| Retired Members and Beneficiaries | 887,663 | 112,053 |
| **Total Actuarial Accrued Liability** | **$3,360,981** | **$3,121,528** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $3,360,981 | $3,360,981 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $3,360,981 | $3,121,528 |
| 2. Actuarial value of assets | 2,794,568 | 3,078,550 |
| 3. Unfunded accrued liability *(1. – 2.)* | 566,413 | 42,978 |
| 4. Funded percentage *(2. ÷ 1.)* | 83% | 99% |
| 5. Combined valuation payroll | $683,194 | $816,864 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 83% | 5% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($604,091) | ($49,783) | ($46,208) | ($600,516) | ($51,650) |
| December 31, 2009 | $717,651 | $54,820 | $55,078 | $717,909 | $56,876 |
| December 31, 2011 | N/A | N/A | N/A | $449,020 | $33,160 |
| **Total** | | | | **$566,413** | **$38,386** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,121,528 |
| b. Normal cost at December 31, 2010 | 38,497 |
| c. Benefit payments during 2011 | (81,236) |
| d. Interest at 8.0% to December 31, 2011 | 249,553 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,328,342 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,328,342 |
| 2. Actuarial accrued liability at December 31, 2011 | 3,360,981 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (32,639) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,078,550 |
| b. Contributions for 2011[1] | 45,419 |
| c. Benefit payments and expenses during 2011 | (81,772) |
| d. Interest at 8.0% to December 31, 2011 | 244,830 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,287,027 |
| 5. Actuarial value of assets at December 31, 2011 | 2,794,568 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (492,458) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($525,097)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$42,978** |
| 2. Expected increase | (1,662) |
| 3. Liability (gain)/loss | 32,639 |
| 4. Asset (gain)/loss | 492,458 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$566,413** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 16,778 | 344,054 | 4.88% | 16,735 | 438,144 | 3.82% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 21,901 | 172,695 | 12.68% | 21,762 | 175,869 | 12.37% |
| **Total** | **$38,679** | **$516,749** | **7.49%** | **$38,497** | **$614,013** | **6.27%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $566,413 | $42,978 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 38,386 | (175) |
| 3. Combined valuation payroll | 683,194 | 816,864 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 5.62% | (0.02%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.49% | 6.27% |
| b. Tier 1/Tier 2 UAL rate | 5.62% | (0.02%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 13.24% | 6.37% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 6.57% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 6.57% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.31% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 83% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 3.57% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 9.57% |
| 7. July 1, 2013 total pension rate, before adjustment | 13.24% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.67%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 5.62% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.95% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 9.57% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.49% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.49% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 9.57% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.49% | 6.27% |
| b. Tier 1/Tier 2 UAL rate | 1.95% | (0.02%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 9.57% | 6.37% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $344,054 | $0 | $344,054 |
| Tier 2 | 172,695 | 0 | 172,695 |
| Tier 1/Tier 2 valuation payroll | 516,749 | 0 | 516,749 |
| OPSRP valuation payroll | 166,445 | 0 | 166,445 |
| **Combined valuation payroll** | **$683,194** | **$0** | **$683,194** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 9 | 4 | 5 | 18 | 9 | 4 | 6 | 19 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 9 | 4 | 5 | 18 | 9 | 4 | 6 | 19 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 4 | 0 | 1 | 5 | 3 | 0 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 0 | 1 | 5 | 3 | 0 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 0 | 0 | 3 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **17** | **4** | **6** | **27** | **14** | **4** | **6** | **24** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | 1 | 1 | 2 | | | | | | **4** |
| **55-59** | | 1 | | 2 | 1 | | | | | **4** |
| **60-64** | | 1 | | 2 | 1 | 1 | | | | **5** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **3** | **1** | **6** | **2** | **1** | | | | **13** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | 2,089 |
| **45-49** | 1 | 130 |
| **50-54** | 1 | 1,485 |
| **55-59** | | |
| **60-64** | 1 | 1,853 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 4 | 1,389 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 2 | 2,392 |
| **65-69** | | |
| **70-74** | | |
| **75-79** | | |
| **80-84** | 1 | 1,263 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 3 | 2,015 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Nyssa Road Assessment District #2/2550
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Nyssa Road Assessment District #2/2550

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Nyssa Road Assessment District #2 -- #2550

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Nyssa Road Assessment District #2 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Nyssa Road Assessment District #2.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Nyssa Road Assessment District #2*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 4.30% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 39.85% | 39.85% | 39.85% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **44.30%** | **46.27%** | **49.00%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **44.89%** | **46.76%** | **49.49%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 56%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 44.15% | 44.15% |
| Minimum July 1, 2015 Rate | 35.32% | 26.49% |
| Maximum July 1, 2015 Rate | 52.98% | 61.81% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 17 | 19 |
| Amortization factor | 12.076 | 13.016 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 42.75% | 38.42% | 38.42% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 44.15% | 39.85% | 39.85% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,134,475 | $1,663,646 | $529,171 | 68% | $143,952 | 368% |
| 12/31/2007 | 1,171,151 | 1,671,200 | 500,049 | 70% | 146,956 | 340% |
| 12/31/2008 | 835,920 | 1,683,852 | 847,932 | 50% | 144,035 | 589% |
| 12/31/2009 | 933,276 | 1,702,643 | 769,367 | 55% | 154,312 | 499% |
| 12/31/2010 | 1,006,310 | 1,752,967 | 746,657 | 57% | 158,434 | 471% |
| 12/31/2011 | 1,003,416 | 1,782,911 | 779,495 | 56% | 162,497 | 480% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Nyssa Road Assessment District #2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $779,495 | $746,657 |
| Allocated pooled OPSRP UAL | 2,773 | 1,967 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 782,268 | 748,624 |
| Combined valuation payroll | 162,497 | 158,434 |
| Net pension UAL as a percentage of payroll | 481% | 473% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $4,210 | $5,700 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5,545 | $5,174 |
| Tier 1/Tier 2 valuation payroll | 128,807 | 124,733 |
| Tier 1/Tier 2 pension normal cost rate | 4.30% | 4.15% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,782,911 | $1,752,967 |
| Actuarial asset value | 1,003,416 | 1,006,310 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 779,495 | 746,657 |
| Tier 1/ Tier 2 Funded status | 56% | 57% |
| Combined valuation payroll | $162,497 | $158,434 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 480% | 471% |
| Tier 1/Tier 2 UAL rate | 39.85% | 37.77% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 7 | 7 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 162,497 | 158,434 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $205,041 | $195,358 |
| 2. Employer reserves | 122,864 | 61,170 |
| 3. Benefits in force reserve | 675,511 | 749,782 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,003,416** | **$1,006,310** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,006,310 |
| 2. | Regular employer contributions | 59,101 |
| 3. | Benefit payments and expenses | (113,177) |
| 4. | Adjustments[2] | 22,012 |
| 5. | Interest credited | 29,170 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,003,416** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 274 | 365 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 5,271 | 4,809 |
| **Total** | **$5,545** | **$5,174** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $5,545 | $5,545 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 447,076 | 421,197 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 11,153 | 7,043 |
| ▪ **Total Active Members** | **$458,229** | **$428,240** |
| Dormant Members | 96,107 | 90,172 |
| Retired Members and Beneficiaries | 1,228,575 | 1,234,555 |
| **Total Actuarial Accrued Liability** | **$1,782,911** | **$1,752,967** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,782,911 | $1,782,911 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,782,911 | $1,752,967 |
| 2. Actuarial value of assets | 1,003,416 | 1,006,310 |
| 3. Unfunded accrued liability *(1. – 2.)* | 779,495 | 746,657 |
| 4. Funded percentage *(2. ÷ 1.)* | 56% | 57% |
| 5. Combined valuation payroll | $162,497 | $158,434 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 480% | 471% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $424,267 | $34,964 | $32,453 | $421,756 | $36,275 |
| December 31, 2009 | $345,029 | $26,357 | $26,480 | $345,152 | $27,345 |
| December 31, 2011 | N/A | N/A | N/A | $12,587 | $930 |
| **Total** | | | | **$779,495** | **$64,550** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,752,967 |
| b. Normal cost at December 31, 2010 | 5,174 |
| c. Benefit payments during 2011 | (112,435) |
| d. Interest at 8.0% to December 31, 2011 | 136,154 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,781,860 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,781,860 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,782,911 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (1,051) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,006,310 |
| b. Contributions for 2011[1] | 59,101 |
| c. Benefit payments and expenses during 2011 | (113,177) |
| d. Interest at 8.0% to December 31, 2011 | 78,342 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,030,576 |
| 5. Actuarial value of assets at December 31, 2011 | 1,003,416 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (27,160) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($28,211)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$746,657** |
| 2. Expected increase | 4,627 |
| 3. Liability (gain)/loss | 1,051 |
| 4. Asset (gain)/loss | 27,160 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$779,495** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 274 | 75,793 | 0.36% | 365 | 74,118 | 0.49% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 5,271 | 53,014 | 9.94% | 4,809 | 50,615 | 9.50% |
| **Total** | **$5,545** | **$128,807** | **4.30%** | **$5,174** | **$124,733** | **4.15%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $779,495 | $746,657 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 64,550 | 59,649 |
| 3. Combined valuation payroll | 162,497 | 158,434 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 39.72% | 37.65% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 4.30% | 4.15% |
| b. Tier 1/Tier 2 UAL rate | 39.72% | 37.65% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 44.15% | 41.92% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 42.75% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 42.75% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 8.55% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 8.55% |
| | c. Funded percentage | 56% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 17.10% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 25.65% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 59.85% |
| 7. | July 1, 2013 total pension rate, before adjustment | 44.15% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 39.72% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 39.72% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 44.15% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 4.30% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 4.30% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 44.15% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 4.30% | 4.15% |
| b. Tier 1/Tier 2 UAL rate | 39.72% | 37.65% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 44.15% | 41.92% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $75,793 | $0 | $75,793 |
| Tier 2 | 53,014 | 0 | 53,014 |
| Tier 1/Tier 2 valuation payroll | 128,807 | 0 | 128,807 |
| OPSRP valuation payroll | 33,690 | 0 | 33,690 |
| **Combined valuation payroll** | **$162,497** | **$0** | **$162,497** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 1 | 1 | 4 | 2 | 1 | 1 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 1 | 1 | 4 | 2 | 1 | 1 | 4 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 2 | 0 | N/A | 2 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 2 | 0 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 7 | 0 | 0 | 7 | 7 | 0 | 0 | 7 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 7 | 0 | 0 | 7 | 7 | 0 | 0 | 7 |
| **Grand Total Number of Members** | **11** | **1** | **2** | **14** | **12** | **1** | **1** | **14** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | 1 | | | | | | | **1** |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | | 1 | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | **1** | **1** | | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 715 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 715 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 1,237 |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | 1 | 190 |
| **75-79** | 3 | 3,089 |
| **80-84** | | |
| **85-89** | 2 | 258 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 7 | 1,601 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Oak Lodge Sanitary District/2524
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Oak Lodge Sanitary District/2524

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Oak Lodge Sanitary District -- #2524

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Oak Lodge Sanitary District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oak Lodge Sanitary District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Oak Lodge Sanitary District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.54% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.64% | 5.64% | 5.64% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **13.33%** | **12.06%** | **14.79%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.92%** | **12.55%** | **15.28%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 77%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 13.18% | 13.18% |
| Minimum July 1, 2015 Rate | 10.18% | 7.18% |
| Maximum July 1, 2015 Rate | 16.18% | 19.18% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 23 |
| Amortization factor | 17.175 | 14.705 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.28% | 4.37% | 4.37% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.54% | 7.00% | 7.00% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $7,552,268 | $6,658,512 | ($893,756) | 113% | $1,174,454 | (76%) |
| 12/31/2007 | 8,194,776 | 7,329,070 | (865,706) | 112% | 1,226,668 | (71%) |
| 12/31/2008 | 6,153,179 | 7,531,284 | 1,378,105 | 82% | 1,220,058 | 113% |
| 12/31/2009 | 7,325,766 | 8,320,974 | 995,208 | 88% | 1,586,102 | 63% |
| 12/31/2010 | 7,332,942 | 8,828,349 | 1,495,407 | 83% | 1,520,200 | 98% |
| 12/31/2011 | 7,106,323 | 9,259,870 | 2,153,547 | 77% | 1,814,102 | 119% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Oak Lodge Sanitary District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $2,153,547 | $1,495,407 |
| Allocated pooled OPSRP UAL | 30,953 | 18,875 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,184,500 | 1,514,282 |
| Combined valuation payroll | 1,814,102 | 1,520,200 |
| Net pension UAL as a percentage of payroll | 120% | 100% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $46,995 | $54,694 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $75,729 | $63,193 |
| Tier 1/Tier 2 valuation payroll | 1,004,590 | 997,638 |
| Tier 1/Tier 2 pension normal cost rate | 7.54% | 6.33% |
| Tier 1/ Tier 2 Actuarial accrued liability | $9,259,870 | $8,828,349 |
| Actuarial asset value | 7,106,323 | 7,332,942 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 2,153,547 | 1,495,407 |
| Tier 1/ Tier 2 Funded status | 77% | 83% |
| Combined valuation payroll | $1,814,102 | $1,520,200 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 119% | 98% |
| Tier 1/Tier 2 UAL rate | 5.64% | 5.95% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 12 | 13 |
| Tier 1/Tier 2 dormant members | 6 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 19 | 16 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,814,102 | 1,520,200 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $873,167 | $979,857 |
| 2. Employer reserves | 2,722,642 | 2,814,048 |
| 3. Benefits in force reserve | 3,510,513 | 3,539,037 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$7,106,323** | **$7,332,942** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $7,332,942 |
| 2. | Regular employer contributions | 104,387 |
| 3. | Benefit payments and expenses | (588,162) |
| 4. | Adjustments [2] | 54,460 |
| 5. | Interest credited | 202,696 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$7,106,323** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 8,670 | 3,714 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 67,059 | 59,479 |
| **Total** | **$75,729** | **$63,193** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $75,729 | $75,729 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 1,316,184 | 1,634,118 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 823,527 | 684,537 |
| ▪ **Total Active Members** | **$2,139,711** | **$2,318,655** |
| Dormant Members | 735,461 | 682,484 |
| Retired Members and Beneficiaries | 6,384,698 | 5,827,210 |
| **Total Actuarial Accrued Liability** | **$9,259,870** | **$8,828,349** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $9,259,870 | $9,259,870 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $9,259,870 | $8,828,349 |
| 2. Actuarial value of assets | 7,106,323 | 7,332,942 |
| 3. Unfunded accrued liability *(1. – 2.)* | 2,153,547 | 1,495,407 |
| 4. Funded percentage *(2. ÷ 1.)* | 77% | 83% |
| 5. Combined valuation payroll | $1,814,102 | $1,520,200 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 119% | 98% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,120,344) | ($92,328) | ($85,697) | ($1,113,713) | ($95,790) |
| December 31, 2009 | $2,124,839 | $162,316 | $163,078 | $2,125,601 | $168,403 |
| December 31, 2011 | N/A | N/A | N/A | $1,141,659 | $84,311 |
| **Total** | | | | **$2,153,547** | **$156,924** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $8,828,349 |
| b. Normal cost at December 31, 2010 | 63,193 |
| c. Benefit payments during 2011 | (584,307) |
| d. Interest at 8.0% to December 31, 2011 | 687,951 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 8,995,186 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 8,995,186 |
| 2. Actuarial accrued liability at December 31, 2011 | 9,259,870 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (264,684) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 7,332,942 |
| b. Contributions for 2011[1] | 104,387 |
| c. Benefit payments and expenses during 2011 | (588,162) |
| d. Interest at 8.0% to December 31, 2011 | 567,284 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 7,416,451 |
| 5. Actuarial value of assets at December 31, 2011 | 7,106,323 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (310,129) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($574,813)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$1,495,407** |
| 2. Expected increase | 83,327 |
| 3. Liability (gain)/loss | 264,684 |
| 4. Asset (gain)/loss | 310,129 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$2,153,547** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 8,670 | 383,547 | 2.26% | 3,714 | 416,497 | 0.89% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 67,059 | 621,043 | 10.80% | 59,479 | 581,141 | 10.23% |
| **Total** | **$75,729** | **$1,004,590** | **7.54%** | **$63,193** | **$997,638** | **6.33%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $2,153,547 | $1,495,407 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 156,924 | 106,242 |
| 3. Combined valuation payroll | 1,814,102 | 1,520,200 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.65% | 6.99% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.54% | 6.33% |
| b. Tier 1/Tier 2 UAL rate | 8.65% | 6.99% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.32% | 13.44% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 9.28% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.28% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.86% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 77% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.90% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.38% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.18% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.32% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.14%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.65% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.51% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 13.18% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.54% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.54% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 13.18% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.54% | 6.33% |
| b. Tier 1/Tier 2 UAL rate | 5.51% | 5.83% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 13.18% | 12.28% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $383,547 | $0 | $383,547 |
| Tier 2 | 621,043 | 0 | 621,043 |
| Tier 1/Tier 2 valuation payroll | 1,004,590 | 0 | 1,004,590 |
| OPSRP valuation payroll | 809,512 | 0 | 809,512 |
| **Combined valuation payroll** | **$1,814,102** | **$0** | **$1,814,102** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 4 | 8 | 12 | 24 | 5 | 8 | 9 | 22 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 8 | 12 | 24 | 5 | 8 | 9 | 22 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 7 | 3 | N/A | 10 | 9 | 3 | N/A | 12 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 7 | 3 | N/A | 10 | 9 | 3 | N/A | 12 |
| **Dormant Members** | | | | | | | | |
| General Service | 5 | 1 | 0 | 6 | 5 | 1 | 0 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 1 | 0 | 6 | 5 | 1 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 16 | 3 | 0 | 19 | 14 | 2 | 0 | 16 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 16 | 3 | 0 | 19 | 14 | 2 | 0 | 16 |
| **Grand Total Number of Members** | **32** | **15** | **12** | **59** | **33** | **14** | **9** | **56** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | | | | | | | | **1** |
| **35-39** | | | | 1 | | | | | | **1** |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | 1 | 1 | 2 | | 2 | | | | **6** |
| **55-59** | | | 2 | | | | | | | **2** |
| **60-64** | | | | | 1 | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **2** | **4** | **3** | **1** | **2** | | | | **12** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | 2 | 676 |
| **50-54** | | |
| **55-59** | 3 | 914 |
| **60-64** | 1 | 1,660 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 6 | 959 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 10 | 2,960 |
| **65-69** | 3 | 1,166 |
| **70-74** | 3 | 1,762 |
| **75-79** | 1 | 3,107 |
| **80-84** | | |
| **85-89** | 1 | 2,533 |
| **90-94** | 1 | 31 |
| **95-99** | | |
| **100+** | | |
| **Total** | 19 | 2,319 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Oregon Coastal Zone Management Association/2723
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Oregon Coastal Zone Management Association/2723

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Oregon Coastal Zone Management Association -- #2723

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Oregon Coastal Zone Management Association to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oregon Coastal Zone Management Association.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Oregon Coastal Zone Management Association*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.44% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.03%) | (2.03%) | (2.03%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **4.39%** | **7.12%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **4.88%** | **7.61%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 102%.

| **Funded Status as of December 31, 2013** | **80% to 120%** | **Under 70% or Over 130%** |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 7 | 30 |
| Amortization factor | 6.148 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 1.26% | (5.05%) | (5.05%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (2.03%) | (2.03%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $584,473 | $483,515 | ($100,958) | 121% | $102,186 | (99%) |
| 12/31/2007 | 647,922 | 518,451 | (129,471) | 125% | 104,599 | (124%) |
| 12/31/2008 | 547,195 | 539,460 | (7,735) | 101% | 106,454 | (7%) |
| 12/31/2009 | 638,934 | 540,211 | (98,723) | 118% | 111,777 | (88%) |
| 12/31/2010 | 646,619 | 605,147 | (41,472) | 107% | 119,668 | (35%) |
| 12/31/2011 | 660,842 | 645,831 | (15,011) | 102% | 124,205 | (12%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Oregon Coastal Zone Management Association*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($15,011) | ($41,472) |
| Allocated pooled OPSRP UAL | 2,119 | 1,486 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (12,892) | (39,986) |
| Combined valuation payroll | 124,205 | 119,668 |
| Net pension UAL as a percentage of payroll | (10%) | (33%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,218 | $4,305 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $8,857 | $8,025 |
| Tier 1/Tier 2 valuation payroll | 124,205 | 119,668 |
| Tier 1/Tier 2 pension normal cost rate | 7.44% | 8.78% |
| Tier 1/ Tier 2 Actuarial accrued liability | $645,831 | $605,147 |
| Actuarial asset value | 660,842 | 646,619 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (15,011) | (41,472) |
| Tier 1/ Tier 2 Funded status | 102% | 107% |
| Combined valuation payroll | $124,205 | $119,668 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (12%) | (35%) |
| Tier 1/Tier 2 UAL rate | (2.03%) | (3.44%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 124,205 | 119,668 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $171,251 | $161,773 |
| 2. Employer reserves | 391,716 | 376,560 |
| 3. Benefits in force reserve | 97,875 | 108,285 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$660,842** | **$646,619** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $646,619 |
| 2. | Regular employer contributions | 6,657 |
| 3. | Benefit payments and expenses | (16,398) |
| 4. | Adjustments [2] | 2,641 |
| 5. | Interest credited | 21,324 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$660,842** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 8,857 | 8,025 |
| **Total** | **$8,857** | **$8,025** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $8,857 | $8,857 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 322,941 | 299,823 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 144,881 | 127,027 |
| ▪ **Total Active Members** | **$467,822** | **$426,850** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 178,009 | 178,297 |
| **Total Actuarial Accrued Liability** | **$645,831** | **$605,147** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $645,831 | $645,831 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $645,831 | $605,147 |
| 2. Actuarial value of assets | 660,842 | 646,619 |
| 3. Unfunded accrued liability *(1. – 2.)* | (15,011) | (41,472) |
| 4. Funded percentage *(2. ÷ 1.)* | 102% | 107% |
| 5. Combined valuation payroll | $124,205 | $119,668 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (12%) | (35%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($156,845) | ($12,925) | ($11,997) | ($155,917) | ($13,410) |
| December 31, 2009 | $58,706 | $4,484 | $4,506 | $58,728 | $4,652 |
| December 31, 2011 | N/A | N/A | N/A | $82,178 | $6,069 |
| **Total** | | | | **($15,011)** | **($2,689)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $605,147 |
| b. Normal cost at December 31, 2010 | 8,025 |
| c. Benefit payments during 2011 | (16,291) |
| d. Interest at 8.0% to December 31, 2011 | 48,402 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 645,283 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 645,283 |
| 2. Actuarial accrued liability at December 31, 2011 | 645,831 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (548) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 646,619 |
| b. Contributions for 2011[1] | 6,657 |
| c. Benefit payments and expenses during 2011 | (16,398) |
| d. Interest at 8.0% to December 31, 2011 | 51,340 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 688,217 |
| 5. Actuarial value of assets at December 31, 2011 | 660,842 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (27,375) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($27,923)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($41,472)** |
| 2. Expected increase | (1,462) |
| 3. Liability (gain)/loss | 548 |
| 4. Asset (gain)/loss | 27,375 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **($15,011)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 53,584 | 0.00% | 0 | 51,610 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 8,857 | 70,621 | 12.54% | 8,025 | 68,058 | 11.79% |
| **Total** | **$8,857** | **$124,205** | **7.13%** | **$8,025** | **$119,668** | **6.71%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($15,011) | ($41,472) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (2,689) | (4,256) |
| 3. Combined valuation payroll | 124,205 | 119,668 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.16%) | (3.56%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.13% | 6.71% |
| b. Tier 1/Tier 2 UAL rate | (2.16%) | (3.56%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 5.10% | 3.27% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 102% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | 5.10% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.16%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.16%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 5.10% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.31% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.13% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.44% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.44% | 8.78% |
| b. Tier 1/Tier 2 UAL rate | (2.16%) | (3.56%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $53,584 | $0 | $53,584 |
| Tier 2 | 70,621 | 0 | 70,621 |
| Tier 1/Tier 2 valuation payroll | 124,205 | 0 | 124,205 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$124,205** | **$0** | **$124,205** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **2** | **1** | **0** | **3** | **2** | **1** | **0** | **3** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | 1 | | | | | **1** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | **1** | **1** | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | 1 | 1,298 |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 1 | 1,298 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Oregon Community College Association/2685
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
Oregon Community College Association/2685

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Oregon Community College Association/2685

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Oregon Community College Association -- #2685

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Oregon Community College Association to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Oregon Community College Association.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Oregon Community College Association*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.17% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.57%) | (2.57%) | (2.57%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.75%** | **3.85%** | **6.58%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.34%** | **4.34%** | **7.07%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 108%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.60% | 5.60% |
| Minimum July 1, 2015 Rate | 2.60% | 0.00% |
| Maximum July 1, 2015 Rate | 8.60% | 11.60% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 15 | 30 |
| Amortization factor | 10.859 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 4.61% | (1.21%) | (1.21%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.60% | (2.57%) | (2.57%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,419,021 | $1,241,454 | ($177,567) | 114% | $307,030 | (58%) |
| 12/31/2007 | 1,531,782 | 1,330,036 | (201,746) | 115% | 305,146 | (66%) |
| 12/31/2008 | 1,231,401 | 1,345,363 | 113,962 | 92% | 345,098 | 33% |
| 12/31/2009 | 1,319,113 | 1,244,519 | (74,594) | 106% | 333,806 | (22%) |
| 12/31/2010 | 1,448,455 | 1,302,346 | (146,109) | 111% | 351,534 | (42%) |
| 12/31/2011 | 1,413,315 | 1,307,049 | (106,266) | 108% | 361,227 | (29%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Oregon Community College Association*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($106,266) | ($146,109) |
| Allocated pooled OPSRP UAL | 6,163 | 4,365 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (100,103) | (141,744) |
| Combined valuation payroll | 361,227 | 351,534 |
| Net pension UAL as a percentage of payroll | (28%) | (40%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $9,358 | $12,648 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $14,315 | $11,116 |
| Tier 1/Tier 2 valuation payroll | 175,312 | 168,282 |
| Tier 1/Tier 2 pension normal cost rate | 8.17% | 8.73% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,307,049 | $1,302,346 |
| Actuarial asset value | 1,413,315 | 1,448,455 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (106,266) | (146,109) |
| Tier 1/ Tier 2 Funded status | 108% | 111% |
| Combined valuation payroll | $361,227 | $351,534 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (29%) | (42%) |
| Tier 1/Tier 2 UAL rate | (2.57%) | (3.39%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 2 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 361,227 | 351,534 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $221,284 | $333,489 |
| 2. Employer reserves | 842,126 | 846,535 |
| 3. Benefits in force reserve | 349,905 | 268,431 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,413,315** | **$1,448,455** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,448,455 |
| 2. | Regular employer contributions | 12,482 |
| 3. | Benefit payments and expenses | (58,624) |
| 4. | Adjustments[2] | (24,484) |
| 5. | Interest credited | 35,486 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,413,315** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 14,315 | 11,116 |
| **Total** | **$14,315** | **$11,116** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $14,315 | $14,315 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 313,976 | 528,894 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 298,995 | 264,550 |
| ▪ **Total Active Members** | **$612,971** | **$793,444** |
| Dormant Members | 57,693 | 66,917 |
| Retired Members and Beneficiaries | 636,385 | 441,985 |
| **Total Actuarial Accrued Liability** | **$1,307,049** | **$1,302,346** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,307,049 | $1,307,049 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,307,049 | $1,302,346 |
| 2. Actuarial value of assets | 1,413,315 | 1,448,455 |
| 3. Unfunded accrued liability *(1. – 2.)* | (106,266) | (146,109) |
| 4. Funded percentage *(2. ÷ 1.)* | 108% | 111% |
| 5. Combined valuation payroll | $361,227 | $351,534 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (29%) | (42%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($224,799) | ($18,526) | ($17,195) | ($223,468) | ($19,221) |
| December 31, 2009 | $151,243 | $11,554 | $11,608 | $151,297 | $11,987 |
| December 31, 2011 | N/A | N/A | N/A | ($34,095) | ($2,518) |
| **Total** | | | | **($106,266)** | **($9,752)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,302,346 |
| b. Normal cost at December 31, 2010 | 11,116 |
| c. Benefit payments during 2011 | (58,240) |
| d. Interest at 8.0% to December 31, 2011 | 102,747 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,357,969 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,357,969 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,307,049 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 50,920 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,448,455 |
| b. Contributions for 2011[1] | 12,482 |
| c. Benefit payments and expenses during 2011 | (58,624) |
| d. Interest at 8.0% to December 31, 2011 | 114,031 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,516,344 |
| 5. Actuarial value of assets at December 31, 2011 | 1,413,315 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (103,029) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($52,109)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($146,109)** |
| 2. Expected increase | (12,266) |
| 3. Liability (gain)/loss | (50,920) |
| 4. Asset (gain)/loss | 103,029 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **($106,266)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 14,315 | 175,312 | 8.17% | 11,116 | 168,282 | 6.61% |
| **Total** | **$14,315** | **$175,312** | **8.17%** | **$11,116** | **$168,282** | **6.61%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($106,266) | ($146,109) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (9,752) | (12,330) |
| 3. Combined valuation payroll | 361,227 | 351,534 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.70%) | (3.51%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.17% | 6.61% |
| b. Tier 1/Tier 2 UAL rate | (2.70%) | (3.51%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 5.60% | 3.22% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 108% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | 5.60% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.70%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.70%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 5.60% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.17% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.17% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.60% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.17% | 8.73% |
| b. Tier 1/Tier 2 UAL rate | (2.70%) | (3.51%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 5.60% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 175,312 | 0 | 175,312 |
| Tier 1/Tier 2 valuation payroll | 175,312 | 0 | 175,312 |
| OPSRP valuation payroll | 185,915 | 0 | 185,915 |
| **Combined valuation payroll** | **$361,227** | **$0** | **$361,227** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 2 | 3 | 5 | 0 | 2 | 4 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 3 | 5 | 0 | 2 | 4 | 6 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 4 | 3 | N/A | 7 | 6 | 3 | N/A | 9 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 4 | 3 | N/A | 7 | 6 | 3 | N/A | 9 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 2 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 0 | 2 | 1 | 2 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 5 | 0 | 0 | 5 | 3 | 0 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 0 | 0 | 5 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **10** | **6** | **3** | **19** | **10** | **7** | **4** | **21** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | 2 | | | | | | | **2** |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | **2** | | | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | 1 | 634 |
| 50-54 | 1 | 312 |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 2 | 473 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 646 |
| 60-64 | 2 | 1,176 |
| 65-69 | | |
| 70-74 | 1 | 975 |
| 75-79 | 1 | 507 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 5 | 896 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Owyhee Irrigation District/2533
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Owyhee Irrigation District/2533

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Owyhee Irrigation District -- #2533

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Owyhee Irrigation District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Owyhee Irrigation District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Owyhee Irrigation District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 5.72% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 20.55% | 20.55% | 20.55% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **26.42%** | **26.97%** | **29.70%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **27.01%** | **27.46%** | **30.19%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 66%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 26.27% | 26.27% |
| Minimum July 1, 2015 Rate | 21.02% | 15.77% |
| Maximum July 1, 2015 Rate | 31.52% | 36.77% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 17 | 19 |
| Amortization factor | 12.055 | 13.029 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 26.04% | 20.18% | 20.18% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 26.27% | 20.55% | 20.55% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $6,567,114 | $8,604,883 | $2,037,768 | 76% | $1,044,837 | 195% |
| 12/31/2007 | 6,866,295 | 8,832,458 | 1,966,163 | 78% | 1,139,851 | 172% |
| 12/31/2008 | 4,902,840 | 8,464,726 | 3,561,886 | 58% | 1,128,948 | 316% |
| 12/31/2009 | 5,363,864 | 8,428,446 | 3,064,582 | 64% | 1,172,351 | 261% |
| 12/31/2010 | 5,822,565 | 8,742,967 | 2,920,402 | 67% | 1,218,051 | 240% |
| 12/31/2011 | 5,806,866 | 8,836,456 | 3,029,590 | 66% | 1,230,438 | 246% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Owyhee Irrigation District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $3,029,590 | $2,920,402 |
| Allocated pooled OPSRP UAL | 20,994 | 15,124 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 3,050,584 | 2,935,526 |
| Combined valuation payroll | 1,230,438 | 1,218,051 |
| Net pension UAL as a percentage of payroll | 248% | 241% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $31,875 | $43,824 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $52,797 | $52,573 |
| Tier 1/Tier 2 valuation payroll | 923,528 | 890,943 |
| Tier 1/Tier 2 pension normal cost rate | 5.72% | 5.90% |
| Tier 1/ Tier 2 Actuarial accrued liability | $8,836,456 | $8,742,967 |
| Actuarial asset value | 5,806,866 | 5,822,565 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 3,029,590 | 2,920,402 |
| Tier 1/ Tier 2 Funded status | 66% | 67% |
| Combined valuation payroll | $1,230,438 | $1,218,051 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 246% | 240% |
| Tier 1/Tier 2 UAL rate | 20.55% | 19.28% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 21 | 20 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 27 | 28 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,230,438 | 1,218,051 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,184,616 | $1,157,361 |
| 2. Employer reserves | 1,682,980 | 1,356,141 |
| 3. Benefits in force reserve | 2,939,270 | 3,309,063 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$5,806,866** | **$5,822,565** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $5,822,565 |
| 2. Regular employer contributions | 290,696 |
| 3. Benefit payments and expenses | (492,454) |
| 4. Adjustments[2] | 47,186 |
| 5. Interest credited | 138,874 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$5,806,866** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 22,122 | 23,233 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 30,675 | 29,340 |
| **Total** | **$52,797** | **$52,573** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $52,797 | $52,797 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 3,125,791 | 2,975,987 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 364,909 | 318,435 |
| ▪ **Total Active Members** | **$3,490,700** | **$3,294,422** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 5,345,756 | 5,448,545 |
| **Total Actuarial Accrued Liability** | **$8,836,456** | **$8,742,967** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $8,836,456 | $8,836,456 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $8,836,456 | $8,742,967 |
| 2. Actuarial value of assets | 5,806,866 | 5,822,565 |
| 3. Unfunded accrued liability *(1. – 2.)* | 3,029,590 | 2,920,402 |
| 4. Funded percentage *(2. ÷ 1.)* | 66% | 67% |
| 5. Combined valuation payroll | $1,230,438 | $1,218,051 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 246% | 240% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $1,652,128 | $136,153 | $126,374 | $1,642,349 | $141,259 |
| December 31, 2009 | $1,412,383 | $107,892 | $108,398 | $1,412,889 | $111,938 |
| December 31, 2011 | N/A | N/A | N/A | ($25,648) | ($1,894) |
| **Total** | | | | **$3,029,590** | **$251,303** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $8,742,967 |
| b. Normal cost at December 31, 2010 | 52,573 |
| c. Benefit payments during 2011 | (489,227) |
| d. Interest at 8.0% to December 31, 2011 | 684,074 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 8,990,387 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 8,990,387 |
| 2. Actuarial accrued liability at December 31, 2011 | 8,836,456 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 153,931 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 5,822,565 |
| b. Contributions for 2011[1] | 290,696 |
| c. Benefit payments and expenses during 2011 | (492,454) |
| d. Interest at 8.0% to December 31, 2011 | 457,735 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 6,078,542 |
| 5. Actuarial value of assets at December 31, 2011 | 5,806,866 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (271,675) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($117,744)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,920,402** |
| 2. Expected increase | (8,556) |
| 3. Liability (gain)/loss | (153,931) |
| 4. Asset (gain)/loss | 271,675 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$3,029,590** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 22,122 | 653,586 | 3.38% | 23,233 | 629,259 | 3.69% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 30,675 | 269,942 | 11.36% | 29,340 | 261,684 | 11.21% |
| **Total** | **$52,797** | **$923,528** | **5.72%** | **$52,573** | **$890,943** | **5.90%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $3,029,590 | $2,920,402 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 251,303 | 233,403 |
| 3. Combined valuation payroll | 1,230,438 | 1,218,051 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 20.42% | 19.16% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.72% | 5.90% |
| b. Tier 1/Tier 2 UAL rate | 20.42% | 19.16% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 26.27% | 25.18% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 26.04% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 26.04% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 5.21% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 5.21% |
| | c. Funded percentage | 66% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 10.42% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 15.62% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 36.46% |
| 7. | July 1, 2013 total pension rate, before adjustment | 26.27% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 20.42% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 20.42% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 26.27% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 5.72% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 5.72% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 26.27% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.72% | 5.90% |
| b. Tier 1/Tier 2 UAL rate | 20.42% | 19.16% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 26.27% | 25.18% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $653,586 | $0 | $653,586 |
| Tier 2 | 269,942 | 0 | 269,942 |
| Tier 1/Tier 2 valuation payroll | 923,528 | 0 | 923,528 |
| OPSRP valuation payroll | 306,910 | 0 | 306,910 |
| **Combined valuation payroll** | **$1,230,438** | **$0** | **$1,230,438** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 15 | 6 | 9 | 30 | 14 | 6 | 10 | 30 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 15 | 6 | 9 | 30 | 14 | 6 | 10 | 30 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 3 | 1 | N/A | 4 | 3 | 1 | N/A | 4 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 3 | 1 | N/A | 4 | 3 | 1 | N/A | 4 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 27 | 0 | 1 | 28 | 28 | 0 | 0 | 28 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 27 | 0 | 1 | 28 | 28 | 0 | 0 | 28 |
| **Grand Total Number of Members** | **45** | **7** | **10** | **62** | **45** | **7** | **10** | **62** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 1 | | | | | | | **1** |
| **40-44** | | | | | | | | | | |
| **45-49** | | | 1 | | 1 | 1 | | | | **3** |
| **50-54** | | | | 2 | 1 | 1 | | | | **4** |
| **55-59** | | 1 | 1 | 2 | 2 | 1 | | | | **7** |
| **60-64** | | | | | 2 | | 1 | | | **3** |
| **65-69** | | 1 | 1 | | 1 | | | | | **3** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **2** | **4** | **4** | **7** | **3** | **1** | | | **21** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 2 | 2,509 |
| **60-64** | 2 | 3,372 |
| **65-69** | 4 | 1,205 |
| **70-74** | 7 | 1,687 |
| **75-79** | 5 | 1,365 |
| **80-84** | 2 | 734 |
| **85-89** | 4 | 634 |
| **90-94** | 1 | 106 |
| **95-99** | | |
| **100+** | | |
| **Total** | 27 | 1,456 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Polk County Fire District #1/2688
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Polk County Fire District #1/2688

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Polk County Fire District #1 -- #2688

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Polk County Fire District #1 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk County Fire District #1.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Polk County Fire District #1*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.62% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 3.18% | 3.18% | 3.18% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.95%** | **9.60%** | **12.33%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.54%** | **10.09%** | **12.82%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 86%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.80% | 16.80% |
| Minimum July 1, 2015 Rate | 13.44% | 10.08% |
| Maximum July 1, 2015 Rate | 20.16% | 23.52% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 20 | 30 |
| Amortization factor | 13.573 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.89% | 2.25% | 2.25% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.80% | 3.18% | 3.18% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $2,647,848 | $2,337,783 | ($310,065) | 113% | $648,467 | (48%) |
| 12/31/2007 | 2,802,629 | 2,520,890 | (281,739) | 111% | 751,813 | (37%) |
| 12/31/2008 | 2,136,782 | 2,708,464 | 571,682 | 79% | 977,015 | 59% |
| 12/31/2009 | 2,498,792 | 2,879,399 | 380,607 | 87% | 1,023,760 | 37% |
| 12/31/2010 | 2,752,119 | 3,185,564 | 433,445 | 86% | 1,099,325 | 39% |
| 12/31/2011 | 2,877,755 | 3,340,925 | 463,170 | 86% | 1,112,055 | 42% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Polk County Fire District #1*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $463,170 | $433,445 |
| Allocated pooled OPSRP UAL | 18,974 | 13,649 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 482,144 | 447,094 |
| Combined valuation payroll | 1,112,055 | 1,099,325 |
| Net pension UAL as a percentage of payroll | 43% | 41% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $28,808 | $39,552 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $98,149 | $94,088 |
| Tier 1/Tier 2 valuation payroll | 720,641 | 706,609 |
| Tier 1/Tier 2 pension normal cost rate | 13.62% | 13.32% |
| Tier 1/ Tier 2 Actuarial accrued liability | $3,340,925 | $3,185,564 |
| Actuarial asset value | 2,877,755 | 2,752,119 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 463,170 | 433,445 |
| Tier 1/ Tier 2 Funded status | 86% | 86% |
| Combined valuation payroll | $1,112,055 | $1,099,325 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 42% | 39% |
| Tier 1/Tier 2 UAL rate | 3.18% | 2.93% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 9 | 9 |
| Tier 1/Tier 2 dormant members | 6 | 7 |
| Tier 1/Tier 2 retirees and beneficiaries | 11 | 10 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,112,055 | 1,099,325 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $464,779 | $501,283 |
| 2. Employer reserves | 1,815,300 | 1,640,177 |
| 3. Benefits in force reserve | 597,676 | 610,659 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$2,877,755** | **$2,752,119** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $2,752,119 |
| 2. Regular employer contributions | 85,713 |
| 3. Benefit payments and expenses | (100,136) |
| 4. Adjustments [2] | 70,101 |
| 5. Interest credited | 69,959 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,877,755** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $19,447 | $18,726 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 69,799 | 66,511 |
| Tier 2 General Service | 8,903 | 8,851 |
| **Total** | **$98,149** | **$94,088** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $98,149 | $98,149 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $1,150,202 | $1,055,712 |
| ▪ Tier 1 General Service | 134,819 | 147,769 |
| ▪ Tier 2 Police & Fire | 645,116 | 545,782 |
| ▪ Tier 2 General Service | 151,709 | 136,857 |
| ▪ **Total Active Members** | **$2,081,846** | **$1,886,120** |
| Dormant Members | 172,064 | 293,962 |
| Retired Members and Beneficiaries | 1,087,015 | 1,005,482 |
| **Total Actuarial Accrued Liability** | **$3,340,925** | **$3,185,564** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $3,340,925 | $3,340,925 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $3,340,925 | $3,185,564 |
| 2. Actuarial value of assets | 2,877,755 | 2,752,119 |
| 3. Unfunded accrued liability *(1. – 2.)* | 463,170 | 433,445 |
| 4. Funded percentage *(2. ÷ 1.)* | 86% | 86% |
| 5. Combined valuation payroll | $1,112,055 | $1,099,325 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 42% | 39% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($355,254) | ($29,277) | ($27,174) | ($353,151) | ($30,375) |
| December 31, 2009 | $739,002 | $56,452 | $56,717 | $739,267 | $58,569 |
| December 31, 2011 | N/A | N/A | N/A | $77,054 | $5,690 |
| **Total** | | | | **$463,170** | **$33,884** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,185,564 |
| b. Normal cost at December 31, 2010 | 94,088 |
| c. Benefit payments during 2011 | (99,480) |
| d. Interest at 8.0% to December 31, 2011 | 258,393 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,438,565 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,438,565 |
| 2. Actuarial accrued liability at December 31, 2011 | 3,340,925 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 97,640 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,752,119 |
| b. Contributions for 2011[1] | 85,713 |
| c. Benefit payments and expenses during 2011 | (100,136) |
| d. Interest at 8.0% to December 31, 2011 | 219,593 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,957,287 |
| 5. Actuarial value of assets at December 31, 2011 | 2,877,755 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (79,532) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **$18,108** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$433,445** |
| 2. Expected increase | 47,833 |
| 3. Liability (gain)/loss | (97,640) |
| 4. Asset (gain)/loss | 79,532 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$463,170** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $19,447 | $188,909 | 10.29% | $18,726 | $182,579 | 10.26% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 69,799 | 471,423 | 14.81% | 66,511 | 463,502 | 14.35% |
| Tier 2 General Service | 8,903 | 60,309 | 14.76% | 8,851 | 60,528 | 14.62% |
| **Total** | **$98,149** | **$720,641** | **13.62%** | **$94,088** | **$706,609** | **13.32%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $463,170 | $433,445 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 33,884 | 30,845 |
| 3. Combined valuation payroll | 1,112,055 | 1,099,325 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.05% | 2.81% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.62% | 13.32% |
| b. Tier 1/Tier 2 UAL rate | 3.05% | 2.81% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.80% | 16.25% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 14.95% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.95% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.99% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 86% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.95% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 17.95% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.80% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.05% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.05% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.80% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.62% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.62% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.80% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.62% | 13.32% |
| b. Tier 1/Tier 2 UAL rate | 3.05% | 2.81% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.80% | 16.25% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $188,909 | $188,909 |
| Tier 2 | 60,309 | 471,423 | 531,732 |
| Tier 1/Tier 2 valuation payroll | 60,309 | 660,332 | 720,641 |
| OPSRP valuation payroll | 32,493 | 358,921 | 391,414 |
| **Combined valuation payroll** | **$92,802** | **$1,019,253** | **$1,112,055** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| Police & Fire | 2 | 6 | 5 | 13 | 2 | 6 | 5 | 13 |
| Total | 2 | 7 | 6 | 15 | 2 | 7 | 6 | 15 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 6 | 3 | N/A | 9 | 7 | 4 | N/A | 11 |
| Police & Fire | 5 | 3 | N/A | 8 | 5 | 3 | N/A | 8 |
| Total | 11 | 6 | N/A | 17 | 12 | 7 | N/A | 19 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 4 | 1 | 0 | 5 | 5 | 1 | 0 | 6 |
| Total | 5 | 1 | 0 | 6 | 6 | 1 | 0 | 7 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 0 | 0 | 4 | 3 | 0 | 0 | 3 |
| Police & Fire | 7 | 0 | 0 | 7 | 7 | 0 | 0 | 7 |
| Total | 11 | 0 | 0 | 11 | 10 | 0 | 0 | 10 |
| **Grand Total Number of Members** | **29** | **14** | **6** | **49** | **30** | **15** | **6** | **51** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 3 | | | | | | | | **3** |
| **40-44** | | | 1 | 2 | | | | | | **3** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | 1 | | | | | | | **1** |
| **55-59** | | 1 | | | | 1 | | | | **2** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **4** | **2** | **2** | | **1** | | | | **9** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 1 | 301 |
| **40-44** | 2 | 87 |
| **45-49** | | |
| **50-54** | 1 | 40 |
| **55-59** | 2 | 477 |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 6 | 245 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 3 |
| **55-59** | 3 | 264 |
| **60-64** | 5 | 822 |
| **65-69** | 2 | 773 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 11 | 586 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Polk County/2037
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Polk County/2037

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Polk County/2037

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Polk County -- #2037

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Polk County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Polk County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 11.36% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.23% | 5.23% | 5.23% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.74%** | **11.65%** | **14.38%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.33%** | **12.14%** | **14.87%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.59% | 16.59% |
| Minimum July 1, 2015 Rate | 13.27% | 9.95% |
| Maximum July 1, 2015 Rate | 19.91% | 23.23% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.61% | 6.18% | 6.18% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.78% | 6.42% | 6.42% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $62,561,921 | $61,791,795 | ($770,126) | 101% | $11,686,150 | (7%) |
| 12/31/2007 | 65,813,102 | 64,658,271 | (1,154,831) | 102% | 12,774,059 | (9%) |
| 12/31/2008 | 49,132,014 | 66,614,193 | 17,482,179 | 74% | 12,760,103 | 137% |
| 12/31/2009 | 55,947,719 | 69,680,804 | 13,733,085 | 80% | 13,126,561 | 105% |
| 12/31/2010 | 59,956,853 | 72,381,493 | 12,424,640 | 83% | 13,663,943 | 91% |
| 12/31/2011 | 59,227,350 | 75,481,554 | 16,254,204 | 78% | 14,950,846 | 109% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Polk County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $16,254,204 | $12,424,640 |
| Allocated pooled OPSRP UAL | 255,097 | 169,655 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 16,509,301 | 12,594,295 |
| Combined valuation payroll | 14,950,846 | 13,663,943 |
| Net pension UAL as a percentage of payroll | 110% | 92% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $387,309 | $491,607 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $1,003,405 | $972,924 |
| Tier 1/Tier 2 valuation payroll | 8,836,151 | 9,181,719 |
| Tier 1/Tier 2 pension normal cost rate | 11.36% | 10.60% |
| Tier 1/ Tier 2 Actuarial accrued liability | $75,481,554 | $72,381,493 |
| Actuarial asset value | 59,227,350 | 59,956,853 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 16,254,204 | 12,424,640 |
| Tier 1/ Tier 2 Funded status | 78% | 83% |
| Combined valuation payroll | $14,950,846 | $13,663,943 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 109% | 91% |
| Tier 1/Tier 2 UAL rate | 5.23% | 5.39% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 147 | 159 |
| Tier 1/Tier 2 dormant members | 102 | 98 |
| Tier 1/Tier 2 retirees and beneficiaries | 323 | 305 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 14,950,846 | 13,663,943 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $10,513,568 | $11,170,416 |
| 2. Employer reserves | 25,826,691 | 25,429,101 |
| 3. Benefits in force reserve | 22,887,091 | 23,357,336 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$59,227,350** | **$59,956,853** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $59,956,853 |
| 2. | Regular employer contributions | 1,095,446 |
| 3. | Benefit payments and expenses | (3,834,574) |
| 4. | Adjustments[2] | 357,183 |
| 5. | Interest credited | 1,652,443 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$59,227,350** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $197,808 | $180,231 |
| Tier 1 General Service | 164,561 | 175,322 |
| Tier 2 Police & Fire | 299,583 | 287,171 |
| Tier 2 General Service | 341,453 | 330,200 |
| **Total** | **$1,003,405** | **$972,924** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $1,003,405 | $1,003,405 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $4,078,932 | $4,007,229 |
| ▪ Tier 1 General Service | 16,030,707 | 16,786,298 |
| ▪ Tier 2 Police & Fire | 3,589,306 | 3,294,709 |
| ▪ Tier 2 General Service | 5,215,318 | 4,727,861 |
| ▪ **Total Active Members** | **$28,914,263** | **$28,816,097** |
| Dormant Members | 4,941,710 | 5,106,320 |
| Retired Members and Beneficiaries | 41,625,581 | 38,459,076 |
| **Total Actuarial Accrued Liability** | **$75,481,554** | **$72,381,493** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $75,481,554 | $75,481,554 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $75,481,554 | $72,381,493 |
| 2. Actuarial value of assets | 59,227,350 | 59,956,853 |
| 3. Unfunded accrued liability *(1. – 2.)* | 16,254,204 | 12,424,640 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 83% |
| 5. Combined valuation payroll | $14,950,846 | $13,663,943 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 109% | 91% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($2,208,883) | ($182,037) | ($168,962) | ($2,195,808) | ($188,863) |
| December 31, 2009 | $15,995,671 | $1,221,901 | $1,227,639 | $16,001,409 | $1,267,722 |
| December 31, 2011 | N/A | N/A | N/A | $2,448,603 | $180,829 |
| **Total** | | | | **$16,254,204** | **$1,259,688** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $72,381,493 |
| b. Normal cost at December 31, 2010 | 972,924 |
| c. Benefit payments during 2011 | (3,809,440) |
| d. Interest at 8.0% to December 31, 2011 | 5,715,976 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 75,260,953 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 75,260,953 |
| 2. Actuarial accrued liability at December 31, 2011 | 75,481,554 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (220,601) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 59,956,853 |
| b. Contributions for 2011[1] | 1,095,446 |
| c. Benefit payments and expenses during 2011 | (3,834,574) |
| d. Interest at 8.0% to December 31, 2011 | 4,686,983 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 61,904,707 |
| 5. Actuarial value of assets at December 31, 2011 | 59,227,350 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (2,677,357) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($2,897,958)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$12,424,640** |
| 2. Expected increase | 931,606 |
| 3. Liability (gain)/loss | 220,601 |
| 4. Asset (gain)/loss | 2,677,357 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$16,254,204** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $197,808 | $1,020,152 | 19.39% | $180,231 | $1,000,896 | 18.01% |
| Tier 1 General Service | 164,561 | 2,457,262 | 6.70% | 175,322 | 2,806,747 | 6.25% |
| Tier 2 Police & Fire | 299,583 | 1,975,797 | 15.16% | 287,171 | 1,939,591 | 14.81% |
| Tier 2 General Service | 341,453 | 3,382,940 | 10.09% | 330,200 | 3,434,485 | 9.61% |
| **Total** | **$1,003,405** | **$8,836,151** | **11.36%** | **$972,924** | **$9,181,719** | **10.60%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $16,254,204 | $12,424,640 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 1,259,688 | 939,270 |
| 3. Combined valuation payroll | 14,950,846 | 13,663,943 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.43% | 6.87% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.36% | 10.60% |
| b. Tier 1/Tier 2 UAL rate | 8.43% | 6.87% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 19.92% | 17.59% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 12.99% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 12.99% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.60% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 78% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.60% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 9.39% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.59% |
| 7. | July 1, 2013 total pension rate, before adjustment | 19.92% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (3.33%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.43% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.10% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.59% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 11.36% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 11.36% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.59% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 11.36% | 10.60% |
| b. Tier 1/Tier 2 UAL rate | 5.10% | 5.27% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.59% | 15.99% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $2,457,262 | $1,020,152 | $3,477,414 |
| Tier 2 | 3,382,940 | 1,975,797 | 5,358,737 |
| Tier 1/Tier 2 valuation payroll | 5,840,202 | 2,995,949 | 8,836,151 |
| OPSRP valuation payroll | 5,386,926 | 727,769 | 6,114,695 |
| **Combined valuation payroll** | **$11,227,128** | **$3,723,718** | **$14,950,846** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 42 | 63 | 112 | 217 | 49 | 68 | 90 | 207 |
| Police & Fire | 13 | 29 | 13 | 55 | 13 | 29 | 12 | 54 |
| Total | 55 | 92 | 125 | 272 | 62 | 97 | 102 | 261 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 99 | 57 | N/A | 156 | 115 | 72 | N/A | 187 |
| Police & Fire | 13 | 17 | N/A | 30 | 20 | 18 | N/A | 38 |
| Total | 112 | 74 | N/A | 186 | 135 | 90 | N/A | 225 |
| **Dormant Members** | | | | | | | | |
| General Service | 48 | 44 | 2 | 94 | 46 | 42 | 1 | 89 |
| Police & Fire | 6 | 4 | 1 | 11 | 6 | 4 | 1 | 11 |
| Total | 54 | 48 | 3 | 105 | 52 | 46 | 2 | 100 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 258 | 16 | 0 | 274 | 255 | 5 | 0 | 260 |
| Police & Fire | 48 | 1 | 0 | 49 | 44 | 1 | 0 | 45 |
| Total | 306 | 17 | 0 | 323 | 299 | 6 | 0 | 305 |
| **Grand Total Number of Members** | **527** | **231** | **128** | **886** | **548** | **239** | **104** | **891** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | 8 | 3 | | | | | | | 11 |
| 35-39 | | 5 | 14 | 1 | | | | | | 20 |
| 40-44 | | 6 | 14 | 7 | | | | | | 27 |
| 45-49 | | 5 | 8 | 5 | 5 | | | | | 23 |
| 50-54 | | 3 | 7 | 3 | 2 | 1 | | | | 16 |
| 55-59 | | 5 | 5 | 5 | 11 | 4 | 1 | | | 31 |
| 60-64 | | 2 | 3 | 8 | | | | 1 | | 14 |
| 65-69 | | 1 | 2 | | | 1 | | 1 | | 5 |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | 35 | 56 | 29 | 18 | 6 | 1 | 2 | | 147 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 4 | 479 |
| 35-39 | 15 | 588 |
| 40-44 | 18 | 828 |
| 45-49 | 5 | 959 |
| 50-54 | 18 | 827 |
| 55-59 | 17 | 474 |
| 60-64 | 22 | 320 |
| 65-69 | 3 | 305 |
| 70-74 | | |
| 75+ | | |
| Total | 102 | 601 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | 3 | 471 |
| 45-49 | 3 | 1,698 |
| 50-54 | 2 | 352 |
| 55-59 | 22 | 858 |
| 60-64 | 73 | 1,094 |
| 65-69 | 78 | 1,003 |
| 70-74 | 57 | 926 |
| 75-79 | 34 | 849 |
| 80-84 | 32 | 728 |
| 85-89 | 13 | 641 |
| 90-94 | 6 | 438 |
| 95-99 | | |
| 100+ | | |
| Total | 323 | 929 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Polk Soil & Water Conservation District/2613
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Polk Soil & Water Conservation District/2613

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Polk Soil & Water Conservation District -- #2613

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Polk Soil & Water Conservation District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Polk Soil & Water Conservation District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Polk Soil & Water Conservation District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.44% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.11% | 5.11% | 5.11% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.70%** | **11.53%** | **14.26%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.29%** | **12.02%** | **14.75%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 70%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.55% | 14.55% |
| Minimum July 1, 2015 Rate | 11.55% | 8.55% |
| Maximum July 1, 2015 Rate | 17.55% | 20.55% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 19 | 29 |
| Amortization factor | 13.233 | 16.969 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.51% | 2.14% | 2.14% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.55% | 5.11% | 5.11% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $316,941 | $282,831 | ($34,110) | 112% | $182,227 | (19%) |
| 12/31/2007 | 347,871 | 295,001 | (52,870) | 118% | 145,992 | (36%) |
| 12/31/2008 | 300,593 | 316,733 | 16,140 | 95% | 239,349 | 7% |
| 12/31/2009 | 286,697 | 389,879 | 103,182 | 74% | 296,506 | 35% |
| 12/31/2010 | 295,692 | 404,871 | 109,179 | 73% | 207,679 | 53% |
| 12/31/2011 | 287,707 | 412,046 | 124,339 | 70% | 188,085 | 66% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Polk Soil & Water Conservation District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $124,339 | $109,179 |
| Allocated pooled OPSRP UAL | 3,209 | 2,579 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 127,548 | 111,758 |
| Combined valuation payroll | 188,085 | 207,679 |
| Net pension UAL as a percentage of payroll | 68% | 54% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $4,872 | $7,472 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $6,263 | $6,006 |
| Tier 1/Tier 2 valuation payroll | 66,339 | 66,182 |
| Tier 1/Tier 2 pension normal cost rate | 9.44% | 9.07% |
| Tier 1/ Tier 2 Actuarial accrued liability | $412,046 | $404,871 |
| Actuarial asset value | 287,707 | 295,692 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 124,339 | 109,179 |
| Tier 1/ Tier 2 Funded status | 70% | 73% |
| Combined valuation payroll | $188,085 | $207,679 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 66% | 53% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 5.11% | 3.97% |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 188,085 | 207,679 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $37,562 | $35,642 |
| 2. Employer reserves | 98,101 | 91,940 |
| 3. Benefits in force reserve | 152,043 | 168,110 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$287,707** | **$295,692** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $295,692 |
| 2. | Regular employer contributions | 4,223 |
| 3. | Benefit payments and expenses | (25,474) |
| 4. | Adjustments[2] | 5,929 |
| 5. | Interest credited | 7,337 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$287,707** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 6,263 | 6,006 |
| **Total** | **$6,263** | **$6,006** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $6,263 | $6,263 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 53,800 | 53,581 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 78,562 | 69,017 |
| ▪ **Total Active Members** | **$132,362** | **$122,598** |
| Dormant Members | 3,158 | 5,472 |
| Retired Members and Beneficiaries | 276,526 | 276,801 |
| **Total Actuarial Accrued Liability** | **$412,046** | **$404,871** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $412,046 | $412,046 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $412,046 | $404,871 |
| 2. Actuarial value of assets | 287,707 | 295,692 |
| 3. Unfunded accrued liability *(1. – 2.)* | 124,339 | 109,179 |
| 4. Funded percentage *(2. ÷ 1.)* | 70% | 73% |
| 5. Combined valuation payroll | $188,085 | $207,679 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 66% | 53% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($55,915) | ($4,609) | ($4,277) | ($55,583) | ($4,782) |
| December 31, 2009 | $159,722 | $12,201 | $12,258 | $159,779 | $12,659 |
| December 31, 2011 | N/A | N/A | N/A | $20,143 | $1,488 |
| **Total** | | | | **$124,339** | **$9,365** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $404,871 |
| b. Normal cost at December 31, 2010 | 6,006 |
| c. Benefit payments during 2011 | (25,307) |
| d. Interest at 8.0% to December 31, 2011 | 31,858 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 417,428 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 417,428 |
| 2. Actuarial accrued liability at December 31, 2011 | 412,046 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 5,382 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 295,692 |
| b. Contributions for 2011[1] | 4,223 |
| c. Benefit payments and expenses during 2011 | (25,474) |
| d. Interest at 8.0% to December 31, 2011 | 22,805 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 297,246 |
| 5. Actuarial value of assets at December 31, 2011 | 287,707 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (9,539) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($4,157)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$109,179** |
| 2. Expected increase | 11,003 |
| 3. Liability (gain)/loss | (5,382) |
| 4. Asset (gain)/loss | 9,539 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$124,339** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 6,263 | 66,339 | 9.44% | 6,006 | 66,182 | 9.07% |
| **Total** | **$6,263** | **$66,339** | **9.44%** | **$6,006** | **$66,182** | **9.07%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $124,339 | $109,179 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 9,365 | 7,989 |
| 3. Combined valuation payroll | 188,085 | 207,679 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 4.98% | 3.85% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.44% | 9.07% |
| b. Tier 1/Tier 2 UAL rate | 4.98% | 3.85% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.55% | 13.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.51% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.51% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.10% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 70% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.51% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.51% |
| 7. July 1, 2013 total pension rate, before adjustment | 14.55% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 4.98% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.98% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.55% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.44% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.44% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.55% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.44% | 9.07% |
| b. Tier 1/Tier 2 UAL rate | 4.98% | 3.85% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.55% | 13.04% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 66,339 | 0 | 66,339 |
| Tier 1/Tier 2 valuation payroll | 66,339 | 0 | 66,339 |
| OPSRP valuation payroll | 121,746 | 0 | 121,746 |
| **Combined valuation payroll** | **$188,085** | **$0** | **$188,085** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 5 | 6 | 0 | 1 | 5 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 5 | 6 | 0 | 1 | 5 | 6 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 2 | 1 | 3 | 0 | 2 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 1 | 3 | 0 | 2 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **2** | **4** | **6** | **12** | **2** | **4** | **5** | **11** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | 1 | | | | | | | **1** |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 1 | 138 |
| **35-39** | | |
| **40-44** | 1 | 8 |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 2 | 73 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | 1 | 1,980 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 1 | 1,980 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Port of Astoria/2507
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Port of Astoria/2507

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On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Port of Astoria -- #2507

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Port of Astoria to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Astoria.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Port of Astoria*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 7.35% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.43% | 5.43% | 5.43% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **12.93%** | **11.85%** | **14.58%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.52%** | **12.34%** | **15.07%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 83%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.78% | 12.78% |
| Minimum July 1, 2015 Rate | 9.78% | 6.78% |
| Maximum July 1, 2015 Rate | 15.78% | 18.78% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 20 | 25 |
| Amortization factor | 13.487 | 15.645 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.19% | 6.38% | 6.38% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.78% | 5.43% | 5.43% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $5,558,888 | $5,286,546 | ($272,342) | 105% | $945,081 | (29%) |
| 12/31/2007 | 5,391,549 | 4,950,961 | (440,588) | 109% | 735,094 | (60%) |
| 12/31/2008 | 3,900,762 | 5,018,649 | 1,117,887 | 78% | 812,180 | 138% |
| 12/31/2009 | 4,374,426 | 5,245,303 | 870,877 | 83% | 885,928 | 98% |
| 12/31/2010 | 4,723,404 | 5,478,397 | 754,993 | 86% | 1,217,796 | 62% |
| 12/31/2011 | 4,672,295 | 5,646,482 | 974,187 | 83% | 1,358,257 | 72% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Port of Astoria*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $974,187 | $754,993 |
| Allocated pooled OPSRP UAL | 23,175 | 15,120 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 997,362 | 770,113 |
| Combined valuation payroll | 1,358,257 | 1,217,796 |
| Net pension UAL as a percentage of payroll | 73% | 63% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $35,186 | $43,814 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $36,935 | $40,588 |
| Tier 1/Tier 2 valuation payroll | 502,759 | 512,909 |
| Tier 1/Tier 2 pension normal cost rate | 7.35% | 7.91% |
| Tier 1/ Tier 2 Actuarial accrued liability | $5,646,482 | $5,478,397 |
| Actuarial asset value | 4,672,295 | 4,723,404 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 974,187 | 754,993 |
| Tier 1/ Tier 2 Funded status | 83% | 86% |
| Combined valuation payroll | $1,358,257 | $1,217,796 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 72% | 62% |
| Tier 1/Tier 2 UAL rate | 5.43% | 4.54% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 8 | 9 |
| Tier 1/Tier 2 dormant members | 3 | 7 |
| Tier 1/Tier 2 retirees and beneficiaries | 26 | 24 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,358,257 | 1,217,796 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $665,216 | $695,571 |
| 2. Employer reserves | 2,031,453 | 1,987,942 |
| 3. Benefits in force reserve | 1,975,626 | 2,039,891 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$4,672,295** | **$4,723,404** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $4,723,404 |
| 2. | Regular employer contributions | 120,043 |
| 3. | Benefit payments and expenses | (331,003) |
| 4. | Adjustments [2] | 41,503 |
| 5. | Interest credited | 118,348 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$4,672,295** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 6,728 | 5,336 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 30,207 | 35,252 |
| **Total** | **$36,935** | **$40,588** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $36,935 | $36,935 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $9 | $8 |
| ▪ Tier 1 General Service | 1,488,777 | 1,077,718 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 325,020 | 325,144 |
| ▪ **Total Active Members** | **$1,813,806** | **$1,402,870** |
| Dormant Members | 239,533 | 716,740 |
| Retired Members and Beneficiaries | 3,593,143 | 3,358,787 |
| **Total Actuarial Accrued Liability** | **$5,646,482** | **$5,478,397** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $5,646,482 | $5,646,482 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $5,646,482 | $5,478,397 |
| 2. Actuarial value of assets | 4,672,295 | 4,723,404 |
| 3. Unfunded accrued liability *(1. – 2.)* | 974,187 | 754,993 |
| 4. Funded percentage *(2. ÷ 1.)* | 83% | 86% |
| 5. Combined valuation payroll | $1,358,257 | $1,217,796 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 72% | 62% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($687,819) | ($56,684) | ($52,613) | ($683,748) | ($58,810) |
| December 31, 2009 | $1,565,179 | $119,564 | $120,125 | $1,565,740 | $124,048 |
| December 31, 2011 | N/A | N/A | N/A | $92,195 | $6,809 |
| **Total** | | | | **$974,187** | **$72,047** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $5,478,397 |
| b. Normal cost at December 31, 2010 | 40,588 |
| c. Benefit payments during 2011 | (328,833) |
| d. Interest at 8.0% to December 31, 2011 | 428,365 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 5,618,517 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 5,618,517 |
| 2. Actuarial accrued liability at December 31, 2011 | 5,646,482 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (27,965) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 4,723,404 |
| b. Contributions for 2011[1] | 120,043 |
| c. Benefit payments and expenses during 2011 | (331,003) |
| d. Interest at 8.0% to December 31, 2011 | 369,434 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 4,881,878 |
| 5. Actuarial value of assets at December 31, 2011 | 4,672,295 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (209,583) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($237,548)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$754,993** |
| 2. Expected increase | (18,354) |
| 3. Liability (gain)/loss | 27,965 |
| 4. Asset (gain)/loss | 209,583 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$974,187** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

### *Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 6,728 | 203,284 | 3.31% | 5,336 | 179,815 | 2.97% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 30,207 | 299,475 | 10.09% | 35,252 | 333,094 | 10.58% |
| **Total** | **$36,935** | **$502,759** | **7.35%** | **$40,588** | **$512,909** | **7.91%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $974,187 | $754,993 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 72,047 | 53,843 |
| 3. Combined valuation payroll | 1,358,257 | 1,217,796 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 5.30% | 4.42% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.35% | 7.91% |
| b. Tier 1/Tier 2 UAL rate | 5.30% | 4.42% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 12.78% | 12.45% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 14.19% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.19% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.84% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 83% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 11.19% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 17.19% |
| 7. July 1, 2013 total pension rate, before adjustment | 12.78% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 5.30% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.30% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.78% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.35% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.35% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.78% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.35% | 7.91% |
| b. Tier 1/Tier 2 UAL rate | 5.30% | 4.42% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 12.78% | 12.45% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $203,284 | $0 | $203,284 |
| Tier 2 | 299,475 | 0 | 299,475 |
| Tier 1/Tier 2 valuation payroll | 502,759 | 0 | 502,759 |
| OPSRP valuation payroll | 855,498 | 0 | 855,498 |
| **Combined valuation payroll** | **$1,358,257** | **$0** | **$1,358,257** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 3 | 5 | 23 | 31 | 3 | 6 | 17 | 26 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 5 | 23 | 31 | 3 | 6 | 17 | 26 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 6 | 1 | N/A | 7 | 5 | 0 | N/A | 5 |
| Police & Fire | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Total | 7 | 1 | N/A | 8 | 6 | 0 | N/A | 6 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 2 | 1 | 4 | 4 | 3 | 1 | 8 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 2 | 1 | 4 | 4 | 3 | 1 | 8 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 21 | 4 | 0 | 25 | 22 | 1 | 0 | 23 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Total | 22 | 4 | 0 | 26 | 23 | 1 | 0 | 24 |
| **Grand Total Number of Members** | **33** | **12** | **24** | **69** | **36** | **10** | **18** | **64** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | 1 | | | | | | | 1 |
| 40-44 | | 1 | | | | | | | | 1 |
| 45-49 | | | | | | | | | | |
| 50-54 | | | 1 | | | | | | | 1 |
| 55-59 | | | 1 | | | 1 | | | | 2 |
| 60-64 | 1 | | | | 1 | | | | | 2 |
| 65-69 | | | | 1 | | | | | | 1 |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | 1 | 1 | 3 | 1 | 1 | 1 | | | | 8 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 2 | 755 |
| 60-64 | 1 | 576 |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 3 | 695 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 2,719 |
| 60-64 | 8 | 759 |
| 65-69 | 7 | 456 |
| 70-74 | 4 | 2,232 |
| 75-79 | 2 | 634 |
| 80-84 | 2 | 1,366 |
| 85-89 | 1 | 1,449 |
| 90-94 | 1 | 901 |
| 95-99 | | |
| 100+ | | |
| Total | 26 | 1,048 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Port of Cascade Locks/2633
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Port of Cascade Locks/2633

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Port of Cascade Locks/2633

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Port of Cascade Locks -- #2633

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Port of Cascade Locks to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Cascade Locks.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Port of Cascade Locks*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.63% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.88%) | (0.88%) | (0.88%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.90%** | **5.54%** | **8.27%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.49%** | **6.03%** | **8.76%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 97%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.75% | 11.75% |
| Minimum July 1, 2015 Rate | 8.75% | 5.75% |
| Maximum July 1, 2015 Rate | 14.75% | 17.75% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.45% | 0.61% | 0.61% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.08% | 1.45% | 1.45% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $5,860,046 | $5,178,655 | ($681,390) | 113% | $384,941 | (177%) |
| 12/31/2007 | 6,211,650 | 5,250,789 | (960,861) | 118% | 513,469 | (187%) |
| 12/31/2008 | 4,678,329 | 5,108,992 | 430,663 | 92% | 548,853 | 78% |
| 12/31/2009 | 5,074,370 | 5,123,060 | 48,690 | 99% | 547,818 | 9% |
| 12/31/2010 | 5,420,488 | 5,350,182 | (70,306) | 101% | 593,226 | (12%) |
| 12/31/2011 | 5,389,060 | 5,535,473 | 146,413 | 97% | 627,202 | 23% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Port of Cascade Locks*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $146,413 | ($70,306) |
| Allocated pooled OPSRP UAL | 10,702 | 7,366 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 157,115 | (62,940) |
| Combined valuation payroll | 627,202 | 593,226 |
| Net pension UAL as a percentage of payroll | 25% | (11%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $16,248 | $21,343 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $45,654 | $42,905 |
| Tier 1/Tier 2 valuation payroll | 361,531 | 346,264 |
| Tier 1/Tier 2 pension normal cost rate | 12.63% | 12.39% |
| Tier 1/ Tier 2 Actuarial accrued liability | $5,535,473 | $5,350,182 |
| Actuarial asset value | 5,389,060 | 5,420,488 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 146,413 | (70,306) |
| Tier 1/ Tier 2 Funded status | 97% | 101% |
| Combined valuation payroll | $627,202 | $593,226 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 23% | (12%) |
| Tier 1/Tier 2 UAL rate | (0.88%) | (1.91%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 6 | 6 |
| Tier 1/Tier 2 dormant members | 16 | 17 |
| Tier 1/Tier 2 retirees and beneficiaries | 28 | 30 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| ($ in millions) | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| ($ in millions) RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 627,202 | 593,226 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,089,892 | $1,052,454 |
| 2. Employer reserves | 2,910,439 | 2,834,745 |
| 3. Benefits in force reserve | 1,388,729 | 1,533,289 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$5,389,060** | **$5,420,488** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $5,420,488 |
| 2. | Regular employer contributions | 18,866 |
| 3. | Benefit payments and expenses | (232,672) |
| 4. | Adjustments[2] | 40,830 |
| 5. | Interest credited | 141,548 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$5,389,060** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 45,654 | 42,905 |
| **Total** | **$45,654** | **$42,905** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $45,654 | $45,654 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 1,076,511 | 1,036,675 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 494,958 | 417,814 |
| ▪ **Total Active Members** | **$1,571,469** | **$1,454,489** |
| Dormant Members | 1,438,272 | 1,371,052 |
| Retired Members and Beneficiaries | 2,525,732 | 2,524,641 |
| **Total Actuarial Accrued Liability** | **$5,535,473** | **$5,350,182** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $5,535,473 | $5,535,473 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $5,535,473 | $5,350,182 |
| 2. Actuarial value of assets | 5,389,060 | 5,420,488 |
| 3. Unfunded accrued liability *(1. – 2.)* | 146,413 | (70,306) |
| 4. Funded percentage *(2. ÷ 1.)* | 97% | 101% |
| 5. Combined valuation payroll | $627,202 | $593,226 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 23% | (12%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($1,156,362) | ($95,296) | ($88,452) | ($1,149,518) | ($98,870) |
| December 31, 2009 | $1,211,696 | $92,561 | $92,996 | $1,212,131 | $96,032 |
| December 31, 2011 | N/A | N/A | N/A | $83,800 | $6,189 |
| **Total** | | | | **$146,413** | **$3,351** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $5,350,182 |
| b. Normal cost at December 31, 2010 | 42,905 |
| c. Benefit payments during 2011 | (231,147) |
| d. Interest at 8.0% to December 31, 2011 | 422,201 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 5,584,141 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 5,584,141 |
| 2. Actuarial accrued liability at December 31, 2011 | 5,535,473 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 48,668 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 5,420,488 |
| b. Contributions for 2011[1] | 18,866 |
| c. Benefit payments and expenses during 2011 | (232,672) |
| d. Interest at 8.0% to December 31, 2011 | 425,087 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 5,631,770 |
| 5. Actuarial value of assets at December 31, 2011 | 5,389,060 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (242,709) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($194,041)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($70,306)** |
| 2. Expected increase | 22,678 |
| 3. Liability (gain)/loss | (48,668) |
| 4. Asset (gain)/loss | 242,709 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$146,413** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 45,654 | 361,531 | 12.63% | 42,905 | 346,264 | 12.39% |
| **Total** | **$45,654** | **$361,531** | **12.63%** | **$42,905** | **$346,264** | **12.39%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $146,413 | ($70,306) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 3,351 | (12,013) |
| 3. Combined valuation payroll | 627,202 | 593,226 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.53% | (2.03%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.63% | 12.39% |
| b. Tier 1/Tier 2 UAL rate | 0.53% | (2.03%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 13.29% | 10.48% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.75% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.75% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.75% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 97% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.75% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.75% |
| 7. July 1, 2013 total pension rate, before adjustment | 13.29% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.54%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.53% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.01%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.75% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.63% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.63% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.75% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.63% | 12.39% |
| b. Tier 1/Tier 2 UAL rate | (1.01%) | (2.03%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 11.75% | 10.48% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 361,531 | 0 | 361,531 |
| Tier 1/Tier 2 valuation payroll | 361,531 | 0 | 361,531 |
| OPSRP valuation payroll | 265,671 | 0 | 265,671 |
| **Combined valuation payroll** | **$627,202** | **$0** | **$627,202** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 6 | 7 | 13 | 0 | 6 | 7 | 13 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 6 | 7 | 13 | 0 | 6 | 7 | 13 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 3 | 2 | N/A | 5 | 3 | 1 | N/A | 4 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 3 | 2 | N/A | 5 | 3 | 1 | N/A | 4 |
| **Dormant Members** | | | | | | | | |
| General Service | 12 | 4 | 0 | 16 | 11 | 5 | 0 | 16 |
| Police & Fire | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 12 | 4 | 0 | 16 | 12 | 5 | 0 | 17 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 27 | 1 | 0 | 28 | 29 | 1 | 0 | 30 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 27 | 1 | 0 | 28 | 29 | 1 | 0 | 30 |
| **Grand Total Number of Members** | **42** | **13** | **7** | **62** | **44** | **13** | **7** | **64** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | 1 | | | | | | | **1** |
| 50-54 | | | 1 | | | | | | | **1** |
| 55-59 | | 1 | 2 | | | | | | | **3** |
| 60-64 | | 1 | | | | | | | | **1** |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **2** | **4** | | | | | | | **6** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | 1 | 980 |
| 35-39 | 2 | 479 |
| 40-44 | | |
| 45-49 | 4 | 2,462 |
| 50-54 | 2 | 1,095 |
| 55-59 | 1 | 1,937 |
| 60-64 | 2 | 882 |
| 65-69 | 4 | 318 |
| 70-74 | | |
| 75+ | | |
| **Total** | 16 | 1,184 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 2 | 1,419 |
| 60-64 | 5 | 978 |
| 65-69 | 7 | 239 |
| 70-74 | 6 | 729 |
| 75-79 | 6 | 551 |
| 80-84 | 2 | 252 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 28 | 628 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Port of Hood River/2788
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Port of Hood River/2788

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Port of Hood River -- #2788

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Port of Hood River to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Hood River.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Port of Hood River*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 10.23% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 1.03% | 1.03% | 1.03% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.41%** | **7.45%** | **10.18%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.00%** | **7.94%** | **10.67%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 92%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.26% | 11.26% |
| Minimum July 1, 2015 Rate | 8.26% | 5.26% |
| Maximum July 1, 2015 Rate | 14.26% | 17.26% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.94% | 0.37% | 0.37% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 11.30% | 1.07% | 1.07% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,608,516 | $1,236,960 | ($371,556) | 130% | $688,488 | (54%) |
| 12/31/2007 | 1,798,298 | 1,366,266 | (432,032) | 132% | 768,190 | (56%) |
| 12/31/2008 | 1,428,983 | 1,568,804 | 139,821 | 91% | 787,078 | 18% |
| 12/31/2009 | 1,642,037 | 1,682,449 | 40,412 | 98% | 825,736 | 5% |
| 12/31/2010 | 1,847,219 | 1,892,645 | 45,426 | 98% | 874,376 | 5% |
| 12/31/2011 | 1,776,221 | 1,927,241 | 151,020 | 92% | 898,223 | 17% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Port of Hood River*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $151,020 | $45,426 |
| Allocated pooled OPSRP UAL | 15,326 | 10,856 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 166,346 | 56,282 |
| Combined valuation payroll | 898,223 | 874,376 |
| Net pension UAL as a percentage of payroll | 19% | 6% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $23,269 | $31,459 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $73,722 | $67,339 |
| Tier 1/Tier 2 valuation payroll | 720,932 | 692,522 |
| Tier 1/Tier 2 pension normal cost rate | 10.23% | 9.72% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,927,241 | $1,892,645 |
| Actuarial asset value | 1,776,221 | 1,847,219 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 151,020 | 45,426 |
| Tier 1/ Tier 2 Funded status | 92% | 98% |
| Combined valuation payroll | $898,223 | $874,376 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 17% | 5% |
| Tier 1/Tier 2 UAL rate | 1.03% | 0.18% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 16 | 15 |
| Tier 1/Tier 2 dormant members | 6 | 9 |
| Tier 1/Tier 2 retirees and beneficiaries | 8 | 6 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 898,223 | 874,376 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $347,115 | $439,392 |
| 2. Employer reserves | 1,178,366 | 1,251,035 |
| 3. Benefits in force reserve | 250,740 | 156,792 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,776,221** | **$1,847,219** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,847,219 |
| 2. | Regular employer contributions | 51,810 |
| 3. | Benefit payments and expenses | (42,010) |
| 4. | Adjustments[2] | (132,988) |
| 5. | Interest credited | 52,190 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,776,221** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 32,274 | 29,132 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 41,448 | 38,207 |
| **Total** | **$73,722** | **$67,339** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $73,722 | $73,722 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 775,190 | 709,909 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 570,143 | 491,104 |
| ▪ **Total Active Members** | **$1,345,333** | **$1,201,013** |
| Dormant Members | 125,878 | 433,465 |
| Retired Members and Beneficiaries | 456,030 | 258,167 |
| **Total Actuarial Accrued Liability** | **$1,927,241** | **$1,892,645** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $1,927,241 | $1,927,241 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,927,241 | $1,892,645 |
| 2. Actuarial value of assets | 1,776,221 | 1,847,219 |
| 3. Unfunded accrued liability *(1. – 2.)* | 151,020 | 45,426 |
| 4. Funded percentage *(2. ÷ 1.)* | 92% | 98% |
| 5. Combined valuation payroll | $898,223 | $874,376 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 17% | 5% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($490,193) | ($40,396) | ($37,496) | ($487,293) | ($41,911) |
| December 31, 2009 | $533,480 | $40,752 | $40,944 | $533,672 | $42,280 |
| December 31, 2011 | N/A | N/A | N/A | $104,641 | $7,728 |
| **Total** | | | | **$151,020** | **$8,097** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,892,645 |
| b. Normal cost at December 31, 2010 | 67,339 |
| c. Benefit payments during 2011 | (41,734) |
| d. Interest at 8.0% to December 31, 2011 | 155,129 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 2,073,379 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 2,073,379 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,927,241 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 146,138 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,847,219 |
| b. Contributions for 2011[1] | 51,810 |
| c. Benefit payments and expenses during 2011 | (42,010) |
| d. Interest at 8.0% to December 31, 2011 | 148,170 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,005,189 |
| 5. Actuarial value of assets at December 31, 2011 | 1,776,221 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (228,968) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($82,830)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$45,426** |
| 2. Expected increase | 22,764 |
| 3. Liability (gain)/loss | (146,138) |
| 4. Asset (gain)/loss | 228,968 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$151,020** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 32,274 | 322,813 | 10.00% | 29,132 | 317,274 | 9.18% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 41,448 | 398,119 | 10.41% | 38,207 | 375,248 | 10.18% |
| **Total** | **$73,722** | **$720,932** | **10.23%** | **$67,339** | **$692,522** | **9.72%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $151,020 | $45,426 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 8,097 | 514 |
| 3. Combined valuation payroll | 898,223 | 874,376 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.90% | 0.06% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.23% | 9.72% |
| b. Tier 1/Tier 2 UAL rate | 0.90% | 0.06% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 11.26% | 9.90% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 92% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 11.26% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.90% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.90% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.26% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.23% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.23% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.26% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.23% | 9.72% |
| b. Tier 1/Tier 2 UAL rate | 0.90% | 0.06% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 11.26% | 9.90% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $322,813 | $0 | $322,813 |
| Tier 2 | 398,119 | 0 | 398,119 |
| Tier 1/Tier 2 valuation payroll | 720,932 | 0 | 720,932 |
| OPSRP valuation payroll | 177,291 | 0 | 177,291 |
| **Combined valuation payroll** | **$898,223** | **$0** | **$898,223** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 5 | 11 | 7 | 23 | 5 | 10 | 9 | 24 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 11 | 7 | 23 | 5 | 10 | 9 | 24 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 3 | 3 | 0 | 6 | 4 | 5 | 0 | 9 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 3 | 0 | 6 | 4 | 5 | 0 | 9 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 7 | 1 | 0 | 8 | 6 | 0 | 0 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 7 | 1 | 0 | 8 | 6 | 0 | 0 | 6 |
| **Grand Total Number of Members** | **16** | **16** | **7** | **39** | **16** | **16** | **9** | **41** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | 1 | | | | | | | 1 |
| 40-44 | | | 2 | | | | | | | 2 |
| 45-49 | | | 1 | | | | | | | 1 |
| 50-54 | | | 1 | 1 | | | | | | 2 |
| 55-59 | | 1 | 3 | 3 | | | | | | 7 |
| 60-64 | | 1 | | | | | | | | 1 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | 1 | | | | | | 1 |
| 75+ | | | 1 | | | | | | | 1 |
| Total | | 2 | 9 | 5 | | | | | | 16 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 1 | 559 |
| 55-59 | 2 | 195 |
| 60-64 | 1 | 35 |
| 65-69 | 1 | 68 |
| 70-74 | 1 | 162 |
| 75+ | | |
| Total | 6 | 202 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 2 | 581 |
| 60-64 | 1 | 211 |
| 65-69 | 2 | 463 |
| 70-74 | 2 | 329 |
| 75-79 | 1 | 206 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 8 | 395 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Port of St Helens/2570
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
Port of St Helens/2570

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Port of St Helens/2570

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Port of St Helens -- #2570

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Port of St Helens to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of St Helens.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Port of St Helens*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.38% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.98% | 0.98% | 0.98% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **10.51%** | **7.40%** | **10.13%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **11.10%** | **7.89%** | **10.62%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 94%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.36% | 10.36% |
| Minimum July 1, 2015 Rate | 7.36% | 4.36% |
| Maximum July 1, 2015 Rate | 13.36% | 16.36% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 28 | 30 |
| Amortization factor | 16.658 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.08% | 1.52% | 1.52% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.36% | 0.98% | 0.98% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,754,614 | $1,600,465 | ($154,148) | 110% | $470,116 | (33%) |
| 12/31/2007 | 1,910,315 | 1,644,033 | (266,282) | 116% | 584,600 | (46%) |
| 12/31/2008 | 1,437,598 | 1,786,853 | 349,255 | 80% | 529,788 | 66% |
| 12/31/2009 | 1,605,145 | 1,723,418 | 118,273 | 93% | 482,355 | 25% |
| 12/31/2010 | 1,687,521 | 1,734,253 | 46,732 | 97% | 557,265 | 8% |
| 12/31/2011 | 1,659,759 | 1,763,906 | 104,147 | 94% | 703,056 | 15% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Port of St Helens*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $104,147 | $46,732 |
| Allocated pooled OPSRP UAL | 11,996 | 6,919 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 116,143 | 53,651 |
| Combined valuation payroll | 703,056 | 557,265 |
| Net pension UAL as a percentage of payroll | 17% | 10% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $18,213 | $20,050 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $16,512 | $7,469 |
| Tier 1/Tier 2 valuation payroll | 176,118 | 167,245 |
| Tier 1/Tier 2 pension normal cost rate | 9.38% | 4.47% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,763,906 | $1,734,253 |
| Actuarial asset value | 1,659,759 | 1,687,521 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 104,147 | 46,732 |
| Tier 1/ Tier 2 Funded status | 94% | 97% |
| Combined valuation payroll | $703,056 | $557,265 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 15% | 8% |
| Tier 1/Tier 2 UAL rate | 0.98% | 1.24% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 5 | 4 |
| Tier 1/Tier 2 retirees and beneficiaries | 7 | 7 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 703,056 | 557,265 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $131,673 | $128,444 |
| 2. Employer reserves | 829,661 | 792,382 |
| 3. Benefits in force reserve | 698,425 | 766,694 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,659,759** | **$1,687,521** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,687,521 |
| 2. Regular employer contributions | 18,971 |
| 3. Benefit payments and expenses | (117,016) |
| 4. Adjustments[2] | 35,023 |
| 5. Interest credited | 35,260 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,659,759** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 8,201 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 8,311 | 7,469 |
| **Total** | **$16,512** | **$7,469** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $16,512 | $16,512 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 32,647 | 40,835 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 160,315 | 143,357 |
| ▪ **Total Active Members** | **$192,962** | **$184,192** |
| Dormant Members | 300,694 | 287,659 |
| Retired Members and Beneficiaries | 1,270,250 | 1,262,402 |
| **Total Actuarial Accrued Liability** | **$1,763,906** | **$1,734,253** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $1,763,906 | $1,763,906 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,763,906 | $1,734,253 |
| 2. Actuarial value of assets | 1,659,759 | 1,687,521 |
| 3. Unfunded accrued liability *(1. – 2.)* | 104,147 | 46,732 |
| 4. Funded percentage *(2. ÷ 1.)* | 94% | 97% |
| 5. Combined valuation payroll | $703,056 | $557,265 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 15% | 8% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($354,432) | ($29,210) | ($27,111) | ($352,333) | ($30,305) |
| December 31, 2009 | $475,053 | $36,289 | $36,459 | $475,223 | $37,650 |
| December 31, 2011 | N/A | N/A | N/A | ($18,743) | ($1,384) |
| **Total** | | | | **$104,147** | **$5,961** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,734,253 |
| b. Normal cost at December 31, 2010 | 7,469 |
| c. Benefit payments during 2011 | (116,249) |
| d. Interest at 8.0% to December 31, 2011 | 134,688 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,760,161 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,760,161 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,763,906 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (3,745) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,687,521 |
| b. Contributions for 2011[1] | 18,971 |
| c. Benefit payments and expenses during 2011 | (117,016) |
| d. Interest at 8.0% to December 31, 2011 | 131,080 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,720,555 |
| 5. Actuarial value of assets at December 31, 2011 | 1,659,759 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (60,797) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($64,542)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$46,732** |
| 2. Expected increase | (7,127) |
| 3. Liability (gain)/loss | 3,745 |
| 4. Asset (gain)/loss | 60,797 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$104,147** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 8,201 | 79,688 | 10.29% | 0 | 76,840 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 8,311 | 96,430 | 8.62% | 7,469 | 90,405 | 8.26% |
| **Total** | **$16,512** | **$176,118** | **9.38%** | **$7,469** | **$167,245** | **4.47%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $104,147 | $46,732 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 5,961 | 1,622 |
| 3. Combined valuation payroll | 703,056 | 557,265 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.85% | 0.29% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.38% | 4.47% |
| b. Tier 1/Tier 2 UAL rate | 0.85% | 0.29% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.36% | 4.88% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 94% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. July 1, 2013 total pension rate, before adjustment | 10.36% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.85% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.85% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 10.36% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.38% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.38% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 10.36% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.38% | 4.47% |
| b. Tier 1/Tier 2 UAL rate | 0.85% | 1.12% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 10.36% | 5.71% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $79,688 | $0 | $79,688 |
| Tier 2 | 96,430 | 0 | 96,430 |
| Tier 1/Tier 2 valuation payroll | 176,118 | 0 | 176,118 |
| OPSRP valuation payroll | 526,938 | 0 | 526,938 |
| **Combined valuation payroll** | **$703,056** | **$0** | **$703,056** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 1 | 9 | 11 | 1 | 1 | 8 | 10 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 9 | 11 | 1 | 1 | 8 | 10 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 2 | 3 | 0 | 5 | 1 | 3 | 0 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 3 | 0 | 5 | 1 | 3 | 0 | 4 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 6 | 1 | 0 | 7 | 6 | 1 | 0 | 7 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 6 | 1 | 0 | 7 | 6 | 1 | 0 | 7 |
| **Grand Total Number of Members** | **9** | **6** | **9** | **24** | **8** | **6** | **8** | **22** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | 1 | | | | | | | | **1** |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | 1 | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **1** | | | | **1** | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 3 | 481 |
| 55-59 | 2 | 736 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 5 | 583 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 5,344 |
| 65-69 | | |
| 70-74 | 1 | 1,623 |
| 75-79 | 2 | 432 |
| 80-84 | | |
| 85-89 | 2 | 664 |
| 90-94 | 1 | 611 |
| 95-99 | | |
| 100+ | | |
| **Total** | 7 | 1,395 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Port of Umatilla/2581
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Port of Umatilla/2581

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Port of Umatilla/2581

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Port of Umatilla -- #2581

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Port of Umatilla to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Port of Umatilla.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Port of Umatilla*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.53% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.83% | 4.83% | 4.83% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **18.51%** | **11.25%** | **13.98%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **19.10%** | **11.74%** | **14.47%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 75%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 18.36% | 18.36% |
| Minimum July 1, 2015 Rate | 14.69% | 11.02% |
| Maximum July 1, 2015 Rate | 22.03% | 25.70% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 21.06% | 8.64% | 8.64% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 25.44% | 11.91% | 11.91% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,251,503 | $1,197,289 | ($54,215) | 105% | $175,375 | (31%) |
| 12/31/2007 | 1,342,586 | 1,258,201 | (84,385) | 107% | 185,888 | (45%) |
| 12/31/2008 | 1,048,691 | 1,336,803 | 288,112 | 78% | 134,087 | 215% |
| 12/31/2009 | 1,188,372 | 1,391,298 | 202,926 | 85% | 138,238 | 147% |
| 12/31/2010 | 1,286,852 | 1,460,214 | 173,362 | 88% | 142,337 | 122% |
| 12/31/2011 | 1,302,983 | 1,727,626 | 424,643 | 75% | 209,068 | 203% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Port of Umatilla*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $424,643 | $173,362 |
| Allocated pooled OPSRP UAL | 3,567 | 1,767 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 428,210 | 175,129 |
| Combined valuation payroll | 209,068 | 142,337 |
| Net pension UAL as a percentage of payroll | 205% | 123% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $5,416 | $5,121 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $28,289 | $17,906 |
| Tier 1/Tier 2 valuation payroll | 209,068 | 142,337 |
| Tier 1/Tier 2 pension normal cost rate | 13.53% | 12.58% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,727,626 | $1,460,214 |
| Actuarial asset value | 1,302,983 | 1,286,852 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 424,643 | 173,362 |
| Tier 1/ Tier 2 Funded status | 75% | 88% |
| Combined valuation payroll | $209,068 | $142,337 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 203% | 122% |
| Tier 1/Tier 2 UAL rate | 4.83% | 4.28% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 4 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 209,068 | 142,337 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $320,799 | $300,759 |
| 2. Employer reserves | 618,110 | 588,656 |
| 3. Benefits in force reserve | 364,074 | 397,437 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$1,302,983** | **$1,286,852** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,286,852 |
| 2. Regular employer contributions | 15,976 |
| 3. Benefit payments and expenses | (60,998) |
| 4. Adjustments[2] | 15,604 |
| 5. Interest credited | 45,549 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,302,983** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 28,289 | 17,906 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$28,289** | **$17,906** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $28,289 | $28,289 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 561,799 | 374,834 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$561,799** | **$374,834** |
| Dormant Members | 503,673 | 430,979 |
| Retired Members and Beneficiaries | 662,154 | 654,401 |
| **Total Actuarial Accrued Liability** | **$1,727,626** | **$1,460,214** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,727,626 | $1,727,626 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,727,626 | $1,460,214 |
| 2. Actuarial value of assets | 1,302,983 | 1,286,852 |
| 3. Unfunded accrued liability *(1. – 2.)* | 424,643 | 173,362 |
| 4. Funded percentage *(2. ÷ 1.)* | 75% | 88% |
| 5. Combined valuation payroll | $209,068 | $142,337 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 203% | 122% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($139,327) | ($11,483) | ($10,657) | ($138,501) | ($11,914) |
| December 31, 2009 | $343,647 | $26,251 | $26,374 | $343,770 | $27,235 |
| December 31, 2011 | N/A | N/A | N/A | $219,374 | $16,201 |
| **Total** | | | | **$424,643** | **$31,522** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,460,214 |
| b. Normal cost at December 31, 2010 | 17,906 |
| c. Benefit payments during 2011 | (60,598) |
| d. Interest at 8.0% to December 31, 2011 | 115,826 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,533,348 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,533,348 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,727,626 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (194,278) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,286,852 |
| b. Contributions for 2011[1] | 15,976 |
| c. Benefit payments and expenses during 2011 | (60,998) |
| d. Interest at 8.0% to December 31, 2011 | 101,147 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,342,978 |
| 5. Actuarial value of assets at December 31, 2011 | 1,302,983 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (39,995) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($234,273)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$173,362** |
| 2. Expected increase | 17,008 |
| 3. Liability (gain)/loss | 194,278 |
| 4. Asset (gain)/loss | 39,995 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$424,643** |

1 *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 28,289 | 209,068 | 13.53% | 17,906 | 142,337 | 12.58% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$28,289** | **$209,068** | **13.53%** | **$17,906** | **$142,337** | **12.58%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $424,643 | $173,362 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 31,522 | 12,482 |
| 3. Combined valuation payroll | 209,068 | 142,337 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 15.08% | 8.77% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.53% | 12.58% |
| b. Tier 1/Tier 2 UAL rate | 15.08% | 8.77% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 28.74% | 21.47% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 13.86% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 13.86% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.77% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 75% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 4.50% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 9.36% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 18.36% |
| 7. | July 1, 2013 total pension rate, before adjustment | 28.74% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (10.38%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 15.08% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.70% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 18.36% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.53% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.53% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 18.36% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.53% | 12.58% |
| b. Tier 1/Tier 2 UAL rate | 4.70% | 4.16% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 18.36% | 16.86% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $209,068 | $0 | $209,068 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 209,068 | 0 | 209,068 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$209,068** | **$0** | **$209,068** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| **Grand Total Number of Members** | **6** | **0** | **0** | **6** | **6** | **0** | **0** | **6** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | 1 | | | | | | **1** |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | | **1** | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 3,426 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 3,426 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 2,262 |
| 65-69 | 1 | 1,760 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | 1 | 165 |
| 85-89 | | |
| 90-94 | 1 | 76 |
| 95-99 | | |
| 100+ | | |
| **Total** | 4 | 1,066 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Redmond Area Park & Recreation District/2689
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Redmond Area Park & Recreation District/2689

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,


Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary


**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Redmond Area Park & Recreation District -- #2689

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Redmond Area Park & Recreation District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Redmond Area Park & Recreation District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Redmond Area Park & Recreation District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 9.63% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (1.17%) | (1.17%) | (1.17%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.61%** | **5.25%** | **7.98%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **9.20%** | **5.74%** | **8.47%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 106%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.46% | 8.46% |
| Minimum July 1, 2015 Rate | 5.46% | 2.46% |
| Maximum July 1, 2015 Rate | 11.46% | 14.46% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 10 | 14 |
| Amortization factor | 8.341 | 10.510 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.87% | (2.18%) | (2.18%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.46% | (1.17%) | (1.17%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,093,725 | $814,782 | ($278,943) | 134% | $235,014 | (119%) |
| 12/31/2007 | 1,190,252 | 853,147 | (337,105) | 140% | 306,108 | (110%) |
| 12/31/2008 | 958,195 | 916,844 | (41,351) | 105% | 260,448 | (16%) |
| 12/31/2009 | 1,072,442 | 981,667 | (90,775) | 109% | 371,612 | (24%) |
| 12/31/2010 | 1,158,697 | 1,021,030 | (137,667) | 113% | 522,965 | (26%) |
| 12/31/2011 | 1,131,545 | 1,064,956 | (66,589) | 106% | 590,808 | (11%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Redmond Area Park & Recreation District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($66,589) | ($137,667) |
| Allocated pooled OPSRP UAL | 10,081 | 6,493 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (56,508) | (131,174) |
| Combined valuation payroll | 590,808 | 522,965 |
| Net pension UAL as a percentage of payroll | (10%) | (25%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $15,305 | $18,815 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $22,598 | $20,061 |
| Tier 1/Tier 2 valuation payroll | 234,618 | 210,321 |
| Tier 1/Tier 2 pension normal cost rate | 9.63% | 9.54% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,064,956 | $1,021,030 |
| Actuarial asset value | 1,131,545 | 1,158,697 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (66,589) | (137,667) |
| Tier 1/ Tier 2 Funded status | 106% | 113% |
| Combined valuation payroll | $590,808 | $522,965 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (11%) | (26%) |
| Tier 1/Tier 2 UAL rate | (1.17%) | (2.26%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 6 | 6 |
| Tier 1/Tier 2 dormant members | 7 | 7 |
| Tier 1/Tier 2 retirees and beneficiaries | 8 | 7 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 590,808 | 522,965 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $248,366 | $289,605 |
| 2. Employer reserves | 672,679 | 724,668 |
| 3. Benefits in force reserve | 210,501 | 144,423 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$1,131,545** | **$1,158,697** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $1,158,697 |
| 2. Regular employer contributions | (653) |
| 3. Benefit payments and expenses | (35,268) |
| 4. Adjustments[2] | (27,142) |
| 5. Interest credited | 35,912 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,131,545** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 8,677 | 9,478 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 13,921 | 10,583 |
| **Total** | **$22,598** | **$20,061** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $22,598 | $22,598 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 421,741 | 410,488 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 171,998 | 150,848 |
| ▪ **Total Active Members** | **$593,739** | **$561,336** |
| Dormant Members | 88,371 | 221,893 |
| Retired Members and Beneficiaries | 382,846 | 237,801 |
| **Total Actuarial Accrued Liability** | **$1,064,956** | **$1,021,030** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,064,956 | $1,064,956 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,064,956 | $1,021,030 |
| 2. Actuarial value of assets | 1,131,545 | 1,158,697 |
| 3. Unfunded accrued liability *(1. – 2.)* | (66,589) | (137,667) |
| 4. Funded percentage *(2. ÷ 1.)* | 106% | 113% |
| 5. Combined valuation payroll | $590,808 | $522,965 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (11%) | (26%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($342,146) | ($28,196) | ($26,171) | ($340,121) | ($29,253) |
| December 31, 2009 | $253,021 | $19,328 | $19,419 | $253,112 | $20,053 |
| December 31, 2011 | N/A | N/A | N/A | $20,420 | $1,508 |
| **Total** | | | | **($66,589)** | **($7,692)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,021,030 |
| b. Normal cost at December 31, 2010 | 20,061 |
| c. Benefit payments during 2011 | (35,037) |
| d. Interest at 8.0% to December 31, 2011 | 81,886 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,087,940 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,087,940 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,064,956 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 22,984 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,158,697 |
| b. Contributions for 2011[1] | (653) |
| c. Benefit payments and expenses during 2011 | (35,268) |
| d. Interest at 8.0% to December 31, 2011 | 91,259 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,214,035 |
| 5. Actuarial value of assets at December 31, 2011 | 1,131,545 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (82,489) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($59,505)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($137,667)** |
| 2. Expected increase | 11,573 |
| 3. Liability (gain)/loss | (22,984) |
| 4. Asset (gain)/loss | 82,489 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($66,589)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 8,677 | 94,022 | 9.23% | 9,478 | 93,537 | 10.13% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 13,921 | 140,596 | 9.90% | 10,583 | 116,784 | 9.06% |
| **Total** | **$22,598** | **$234,618** | **9.63%** | **$20,061** | **$210,321** | **9.54%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($66,589) | ($137,667) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (7,692) | (12,453) |
| 3. Combined valuation payroll | 590,808 | 522,965 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.30%) | (2.38%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.63% | 9.54% |
| b. Tier 1/Tier 2 UAL rate | (1.30%) | (2.38%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c.)* | 8.46% | 7.28% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 6.87% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 6.87% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.37% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 106% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 3.87% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 9.87% |
| 7. July 1, 2013 total pension rate, before adjustment | 8.46% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.30%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.30%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.46% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 9.63% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 9.63% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.46% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 9.63% | 9.54% |
| b. Tier 1/Tier 2 UAL rate | (1.30%) | (2.38%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 8.46% | 7.28% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $94,022 | $0 | $94,022 |
| Tier 2 | 140,596 | 0 | 140,596 |
| Tier 1/Tier 2 valuation payroll | 234,618 | 0 | 234,618 |
| OPSRP valuation payroll | 356,190 | 0 | 356,190 |
| **Combined valuation payroll** | **$590,808** | **$0** | **$590,808** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 4 | 27 | 33 | 2 | 4 | 45 | 51 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 4 | 27 | 33 | 2 | 4 | 45 | 51 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 7 | 2 | N/A | 9 | 8 | 3 | N/A | 11 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 7 | 2 | N/A | 9 | 8 | 3 | N/A | 11 |
| **Dormant Members** | | | | | | | | |
| General Service | 2 | 5 | 0 | 7 | 2 | 5 | 0 | 7 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 5 | 0 | 7 | 2 | 5 | 0 | 7 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 8 | 0 | 0 | 8 | 7 | 0 | 0 | 7 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 8 | 0 | 0 | 8 | 7 | 0 | 0 | 7 |
| **Grand Total Number of Members** | **19** | **11** | **27** | **57** | **19** | **12** | **45** | **76** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 1 | | 1 | | | | | **2** |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | 1 | | | | | | | **1** |
| **55-59** | | | 1 | | | | | | | **1** |
| **60-64** | | | | 1 | | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **4** | **1** | **1** | | | | | **6** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 3 | 113 |
| **40-44** | 2 | 543 |
| **45-49** | | |
| **50-54** | 1 | 244 |
| **55-59** | | |
| **60-64** | 1 | 706 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 7 | 339 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 4 | 420 |
| **65-69** | 2 | 283 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | 1 | 315 |
| **85-89** | 1 | 69 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 8 | 328 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Rockwood Water PUD/2672
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Rockwood Water PUD/2672

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Rockwood Water PUD -- #2672

**Secondary Employers**

2554 Hazelwood Water District

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Rockwood Water PUD to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Rockwood Water PUD.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Rockwood Water PUD*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 10.02% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.90% | 4.90% | 4.90% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **15.07%** | **11.32%** | **14.05%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.66%** | **11.81%** | **14.54%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 79%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.92% | 14.92% |
| Minimum July 1, 2015 Rate | 11.92% | 8.92% |
| Maximum July 1, 2015 Rate | 17.92% | 20.92% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.10% | 6.62% | 6.62% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 18.27% | 8.25% | 8.25% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $7,503,561 | $7,644,903 | $141,343 | 98% | $1,010,522 | 14% |
| 12/31/2007 | 7,468,920 | 7,344,445 | (124,475) | 102% | 1,225,709 | (10%) |
| 12/31/2008 | 5,852,445 | 7,877,547 | 2,025,102 | 74% | 1,316,034 | 154% |
| 12/31/2009 | 6,656,442 | 8,255,899 | 1,599,457 | 81% | 1,424,777 | 112% |
| 12/31/2010 | 7,086,107 | 8,405,996 | 1,319,889 | 84% | 1,403,320 | 94% |
| 12/31/2011 | 6,767,732 | 8,570,288 | 1,802,556 | 79% | 1,285,852 | 140% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Rockwood Water PUD*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,802,556 | $1,319,889 |
| Allocated pooled OPSRP UAL | 21,940 | 17,424 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,824,496 | 1,337,313 |
| Combined valuation payroll | 1,285,852 | 1,403,320 |
| Net pension UAL as a percentage of payroll | 142% | 95% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $33,311 | $50,489 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $80,009 | $84,296 |
| Tier 1/Tier 2 valuation payroll | 798,211 | 924,039 |
| Tier 1/Tier 2 pension normal cost rate | 10.02% | 9.12% |
| Tier 1/ Tier 2 Actuarial accrued liability | $8,570,288 | $8,405,996 |
| Actuarial asset value | 6,767,732 | 7,086,107 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,802,556 | 1,319,889 |
| Tier 1/ Tier 2 Funded status | 79% | 84% |
| Combined valuation payroll | $1,285,852 | $1,403,320 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 140% | 94% |
| Tier 1/Tier 2 UAL rate | 4.90% | 5.50% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 10 | 12 |
| Tier 1/Tier 2 dormant members | 8 | 8 |
| Tier 1/Tier 2 retirees and beneficiaries | 20 | 17 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### OPSRP

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### Retiree Healthcare

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,285,852 | 1,403,320 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,305,311 | $1,812,767 |
| 2. Employer reserves | 2,733,193 | 3,256,811 |
| 3. Benefits in force reserve | 2,729,228 | 2,016,529 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$6,767,732** | **$7,086,107** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $7,086,107 |
| 2. | Regular employer contributions | 104,360 |
| 3. | Benefit payments and expenses | (457,263) |
| 4. | Adjustments[2] | (197,196) |
| 5. | Interest credited | 231,725 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$6,767,732** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 33,287 | 39,428 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 46,722 | 44,868 |
| **Total** | **$80,009** | **$84,296** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $80,009 | $80,009 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 1,600,507 | 2,692,617 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 571,883 | 498,746 |
| ▪ **Total Active Members** | **$2,172,390** | **$3,191,363** |
| Dormant Members | 1,434,153 | 1,894,312 |
| Retired Members and Beneficiaries | 4,963,745 | 3,320,321 |
| **Total Actuarial Accrued Liability** | **$8,570,288** | **$8,405,996** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $8,570,288 | $8,570,288 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $8,570,288 | $8,405,996 |
| 2. Actuarial value of assets | 6,767,732 | 7,086,107 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,802,556 | 1,319,889 |
| 4. Funded percentage *(2. ÷ 1.)* | 79% | 84% |
| 5. Combined valuation payroll | $1,285,852 | $1,403,320 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 140% | 94% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($322,631) | ($26,588) | ($24,679) | ($320,722) | ($27,585) |
| December 31, 2009 | $1,928,709 | $147,333 | $148,025 | $1,929,401 | $152,858 |
| December 31, 2011 | N/A | N/A | N/A | $193,877 | $14,318 |
| **Total** | | | | **$1,802,556** | **$139,591** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $8,405,996 |
| b. Normal cost at December 31, 2010 | 84,296 |
| c. Benefit payments during 2011 | (454,266) |
| d. Interest at 8.0% to December 31, 2011 | 661,053 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 8,697,079 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 8,697,079 |
| 2. Actuarial accrued liability at December 31, 2011 | 8,570,288 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 126,791 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 7,086,107 |
| b. Contributions for 2011[1] | 104,360 |
| c. Benefit payments and expenses during 2011 | (457,263) |
| d. Interest at 8.0% to December 31, 2011 | 552,772 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 7,285,976 |
| 5. Actuarial value of assets at December 31, 2011 | 6,767,732 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (518,244) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($391,453)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$1,319,889** |
| 2. Expected increase | 91,214 |
| 3. Liability (gain)/loss | (126,791) |
| 4. Asset (gain)/loss | 518,244 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,802,556** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 33,287 | 272,887 | 12.20% | 39,428 | 402,071 | 9.81% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 46,722 | 525,324 | 8.89% | 44,868 | 521,968 | 8.60% |
| **Total** | **$80,009** | **$798,211** | **10.02%** | **$84,296** | **$924,039** | **9.12%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,802,556 | $1,319,889 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 139,591 | 99,610 |
| 3. Combined valuation payroll | 1,285,852 | 1,403,320 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 10.86% | 7.10% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.02% | 9.12% |
| b. Tier 1/Tier 2 UAL rate | 10.86% | 7.10% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 21.01% | 16.34% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 11.62% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 11.62% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.32% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 79% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.30% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.32% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 14.92% |
| 7. July 1, 2013 total pension rate, before adjustment | 21.01% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (6.09%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 10.86% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 4.77% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.92% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.02% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.02% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.92% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.02% | 9.12% |
| b. Tier 1/Tier 2 UAL rate | 4.77% | 5.38% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.92% | 14.62% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $272,887 | $0 | $272,887 |
| Tier 2 | 525,324 | 0 | 525,324 |
| Tier 1/Tier 2 valuation payroll | 798,211 | 0 | 798,211 |
| OPSRP valuation payroll | 487,641 | 0 | 487,641 |
| **Combined valuation payroll** | **$1,285,852** | **$0** | **$1,285,852** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 3 | 7 | 9 | 19 | 5 | 7 | 9 | 21 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 7 | 9 | 19 | 5 | 7 | 9 | 21 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 4 | 2 | N/A | 6 | 4 | 2 | N/A | 6 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 4 | 2 | N/A | 6 | 4 | 2 | N/A | 6 |
| **Dormant Members** | | | | | | | | |
| General Service | 6 | 2 | 0 | 8 | 7 | 1 | 0 | 8 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 6 | 2 | 0 | 8 | 7 | 1 | 0 | 8 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 18 | 2 | 0 | 20 | 16 | 1 | 0 | 17 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 18 | 2 | 0 | 20 | 16 | 1 | 0 | 17 |
| **Grand Total Number of Members** | **31** | **13** | **9** | **53** | **32** | **11** | **9** | **52** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | | | | | | | | **1** |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | 1 | 1 | | | | | | | **2** |
| **45-49** | | | 3 | | | | | | | **3** |
| **50-54** | | | | 1 | | | | | | **1** |
| **55-59** | | | | 2 | | | | | | **2** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **3** | **4** | **3** | | | | | | **10** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | 3 | 1,863 |
| **50-54** | 1 | 3,835 |
| **55-59** | 2 | 1,641 |
| **60-64** | 1 | 975 |
| **65-69** | 1 | |
| **70-74** | | |
| **75+** | | |
| **Total** | 8 | 1,710 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 424 |
| **55-59** | 2 | 4,278 |
| **60-64** | 6 | 2,318 |
| **65-69** | 4 | 522 |
| **70-74** | 1 | 190 |
| **75-79** | 3 | 1,718 |
| **80-84** | 1 | 594 |
| **85-89** | 1 | 1,943 |
| **90-94** | | |
| **95-99** | 1 | 33 |
| **100+** | | |
| **Total** | 20 | 1,645 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Salem Housing Authority/2747
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Salem Housing Authority/2747

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Salem Housing Authority -- #2747

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Salem Housing Authority to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Salem Housing Authority.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Salem Housing Authority*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 8.50% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 8.65% | 8.65% | 8.65% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **17.30%** | **15.07%** | **17.80%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.89%** | **15.56%** | **18.29%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 79%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 17.15% | 17.15% |
| Minimum July 1, 2015 Rate | 13.72% | 10.29% |
| Maximum July 1, 2015 Rate | 20.58% | 24.01% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 20 |
| Amortization factor | 12.608 | 13.703 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.10% | 9.48% | 9.48% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.15% | 8.65% | 8.65% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $10,264,594 | $10,600,069 | $335,475 | 97% | $2,516,885 | 13% |
| 12/31/2007 | 10,870,655 | 10,943,000 | 72,345 | 99% | 2,396,321 | 3% |
| 12/31/2008 | 7,603,858 | 10,799,496 | 3,195,638 | 70% | 2,239,378 | 143% |
| 12/31/2009 | 8,872,284 | 12,178,813 | 3,306,529 | 73% | 2,575,374 | 128% |
| 12/31/2010 | 9,319,449 | 12,223,232 | 2,903,783 | 76% | 2,702,281 | 107% |
| 12/31/2011 | 9,559,472 | 12,177,434 | 2,617,962 | 79% | 2,434,177 | 108% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Salem Housing Authority*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $2,617,962 | $2,903,783 |
| Allocated pooled OPSRP UAL | 41,533 | 33,552 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,659,495 | 2,937,335 |
| Combined valuation payroll | 2,434,177 | 2,702,281 |
| Net pension UAL as a percentage of payroll | 109% | 109% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $63,059 | $97,224 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $146,960 | $146,146 |
| Tier 1/Tier 2 valuation payroll | 1,729,691 | 1,877,065 |
| Tier 1/Tier 2 pension normal cost rate | 8.50% | 7.79% |
| Tier 1/ Tier 2 Actuarial accrued liability | $12,177,434 | $12,223,232 |
| Actuarial asset value | 9,559,472 | 9,319,449 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 2,617,962 | 2,903,783 |
| Tier 1/ Tier 2 Funded status | 79% | 76% |
| Combined valuation payroll | $2,434,177 | $2,702,281 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 108% | 107% |
| Tier 1/Tier 2 UAL rate | 8.65% | 8.24% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 32 | 35 |
| Tier 1/Tier 2 dormant members | 13 | 16 |
| Tier 1/Tier 2 retirees and beneficiaries | 38 | 35 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 2,434,177 | 2,702,281 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $1,539,825 | $1,786,405 |
| 2. Employer reserves | 3,878,220 | 3,274,629 |
| 3. Benefits in force reserve | 4,141,427 | 4,258,415 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$9,559,472** | **$9,319,449** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $9,319,449 |
| 2. Regular employer contributions | 308,384 |
| 3. Benefit payments and expenses | (693,868) |
| 4. Adjustments[2] | 382,478 |
| 5. Interest credited | 243,029 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$9,559,472** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 47,345 | 56,063 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 99,615 | 90,083 |
| **Total** | **$146,960** | **$146,146** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $146,960 | $146,960 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 3,007,403 | 3,204,164 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 1,077,737 | 935,651 |
| ▪ **Total Active Members** | **$4,085,140** | **$4,139,815** |
| Dormant Members | 560,131 | 1,071,714 |
| Retired Members and Beneficiaries | 7,532,163 | 7,011,703 |
| **Total Actuarial Accrued Liability** | **$12,177,434** | **$12,223,232** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $12,177,434 | $12,177,434 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $12,177,434 | $12,223,232 |
| 2. Actuarial value of assets | 9,559,472 | 9,319,449 |
| 3. Unfunded accrued liability *(1. – 2.)* | 2,617,962 | 2,903,783 |
| 4. Funded percentage *(2. ÷ 1.)* | 79% | 76% |
| 5. Combined valuation payroll | $2,434,177 | $2,702,281 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 108% | 107% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($576,487) | ($47,508) | ($44,097) | ($573,076) | ($49,290) |
| December 31, 2009 | $3,896,196 | $297,629 | $299,026 | $3,897,593 | $308,790 |
| December 31, 2011 | N/A | N/A | N/A | ($706,555) | ($52,179) |
| **Total** | | | | **$2,617,962** | **$207,321** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $12,223,232 |
| b. Normal cost at December 31, 2010 | 146,146 |
| c. Benefit payments during 2011 | (689,320) |
| d. Interest at 8.0% to December 31, 2011 | 961,977 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 12,642,035 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 12,642,035 |
| 2. Actuarial accrued liability at December 31, 2011 | 12,177,434 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 464,601 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 9,319,449 |
| b. Contributions for 2011[1] | 308,384 |
| c. Benefit payments and expenses during 2011 | (693,868) |
| d. Interest at 8.0% to December 31, 2011 | 730,137 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 9,664,101 |
| 5. Actuarial value of assets at December 31, 2011 | 9,559,472 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (104,630) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **$359,971** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$2,903,783** |
| 2. Expected increase | 74,150 |
| 3. Liability (gain)/loss | (464,601) |
| 4. Asset (gain)/loss | 104,630 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$2,617,962** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 47,345 | 745,952 | 6.35% | 56,063 | 904,585 | 6.20% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 99,615 | 983,739 | 10.13% | 90,083 | 972,480 | 9.26% |
| **Total** | **$146,960** | **$1,729,691** | **8.50%** | **$146,146** | **$1,877,065** | **7.79%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $2,617,962 | $2,903,783 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 207,321 | 219,405 |
| 3. Combined valuation payroll | 2,434,177 | 2,702,281 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.52% | 8.12% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.50% | 7.79% |
| b. Tier 1/Tier 2 UAL rate | 8.52% | 8.12% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 17.15% | 16.03% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 16.10% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 16.10% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.22% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.22% |
| c. Funded percentage | 79% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.54% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 12.56% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.64% |
| 7. July 1, 2013 total pension rate, before adjustment | 17.15% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.52% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 8.52% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 17.15% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 8.50% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 8.50% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 17.15% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 8.50% | 7.79% |
| b. Tier 1/Tier 2 UAL rate | 8.52% | 8.12% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 17.15% | 16.03% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $745,952 | $0 | $745,952 |
| Tier 2 | 983,739 | 0 | 983,739 |
| Tier 1/Tier 2 valuation payroll | 1,729,691 | 0 | 1,729,691 |
| OPSRP valuation payroll | 704,486 | 0 | 704,486 |
| **Combined valuation payroll** | **$2,434,177** | **$0** | **$2,434,177** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 13 | 19 | 15 | 47 | 16 | 19 | 18 | 53 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 13 | 19 | 15 | 47 | 16 | 19 | 18 | 53 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 6 | 8 | N/A | 14 | 6 | 6 | N/A | 12 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 6 | 8 | N/A | 14 | 6 | 6 | N/A | 12 |
| **Dormant Members** | | | | | | | | |
| General Service | 5 | 8 | 2 | 15 | 6 | 10 | 1 | 17 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 5 | 8 | 2 | 15 | 6 | 10 | 1 | 17 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 34 | 4 | 0 | 38 | 35 | 0 | 0 | 35 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 34 | 4 | 0 | 38 | 35 | 0 | 0 | 35 |
| **Grand Total Number of Members** | **58** | **39** | **17** | **114** | **63** | **35** | **19** | **117** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 3 | 3 | | | | | | | **6** |
| **40-44** | | 1 | 1 | 1 | | | | | | **3** |
| **45-49** | | 1 | 2 | | | | | | | **3** |
| **50-54** | | 3 | | 2 | 1 | | | | | **6** |
| **55-59** | | | 2 | 3 | 4 | | | | | **9** |
| **60-64** | | 2 | 1 | | 2 | | | | | **5** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **10** | **9** | **6** | **7** | | | | | **32** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | 1 | 9 |
| **30-34** | | |
| **35-39** | 1 | 766 |
| **40-44** | | |
| **45-49** | 1 | 357 |
| **50-54** | 2 | 1,025 |
| **55-59** | 4 | 1,354 |
| **60-64** | 3 | 609 |
| **65-69** | 1 | 13 |
| **70-74** | | |
| **75+** | | |
| **Total** | 13 | 803 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | 1 | 1,159 |
| **50-54** | 1 | 1,314 |
| **55-59** | 4 | 1,295 |
| **60-64** | 11 | 1,809 |
| **65-69** | 13 | 931 |
| **70-74** | 5 | 1,444 |
| **75-79** | 3 | 1,855 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 38 | 1,380 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Salmon Harbor-Douglas County/2675
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Salmon Harbor-Douglas County/2675

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Salmon Harbor-Douglas County/2675

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Salmon Harbor-Douglas County -- #2675

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Salmon Harbor-Douglas County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Salmon Harbor-Douglas County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Salmon Harbor-Douglas County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 6.08% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.05% | 0.05% | 0.05% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **6.28%** | **6.47%** | **9.20%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.87%** | **6.96%** | **9.69%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 99%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 6.13% | 6.13% |
| Minimum July 1, 2015 Rate | 3.13% | 0.13% |
| Maximum July 1, 2015 Rate | 9.13% | 12.13% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.54% | 0.31% | 0.31% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.39% | 0.31% | 0.31% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,230,094 | $1,056,545 | ($173,548) | 116% | $404,264 | (43%) |
| 12/31/2007 | 1,343,874 | 1,137,130 | (206,744) | 118% | 472,680 | (44%) |
| 12/31/2008 | 1,080,491 | 1,219,367 | 138,876 | 89% | 463,241 | 30% |
| 12/31/2009 | 1,233,172 | 1,251,589 | 18,417 | 99% | 488,950 | 4% |
| 12/31/2010 | 1,383,010 | 1,389,813 | 6,803 | 100% | 503,210 | 1% |
| 12/31/2011 | 1,432,878 | 1,451,916 | 19,038 | 99% | 508,435 | 4% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Salmon Harbor-Douglas County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $19,038 | $6,803 |
| Allocated pooled OPSRP UAL | 8,675 | 6,248 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 27,713 | 13,051 |
| Combined valuation payroll | 508,435 | 503,210 |
| Net pension UAL as a percentage of payroll | 5% | 3% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $13,171 | $18,105 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $21,559 | $26,441 |
| Tier 1/Tier 2 valuation payroll | 354,787 | 358,610 |
| Tier 1/Tier 2 pension normal cost rate | 6.08% | 7.37% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,451,916 | $1,389,813 |
| Actuarial asset value | 1,432,878 | 1,383,010 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 19,038 | 6,803 |
| Tier 1/ Tier 2 Funded status | 99% | 100% |
| Combined valuation payroll | $508,435 | $503,210 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 4% | 1% |
| Tier 1/Tier 2 UAL rate | 0.05% | (0.11%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 8 | 9 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 4 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of December 31, 2011 | Actuarial Valuation as of December 31, 2010 |
|---|---|---|
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 508,435 | 503,210 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $391,146 | $374,806 |
| 2. Employer reserves | 944,089 | 898,991 |
| 3. Benefits in force reserve | 97,644 | 109,213 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,432,878** | **$1,383,010** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,383,010 |
| 2. | Regular employer contributions | 30,374 |
| 3. | Benefit payments and expenses | (16,360) |
| 4. | Adjustments[2] | (12,206) |
| 5. | Interest credited | 48,060 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,432,878** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 3,081 | 3,028 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 18,478 | 23,413 |
| **Total** | **$21,559** | **$26,441** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $21,559 | $21,559 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 890,533 | 823,922 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 242,763 | 253,093 |
| ▪ **Total Active Members** | **$1,133,296** | **$1,077,015** |
| Dormant Members | 141,032 | 132,972 |
| Retired Members and Beneficiaries | 177,588 | 179,826 |
| **Total Actuarial Accrued Liability** | **$1,451,916** | **$1,389,813** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,451,916 | $1,451,916 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,451,916 | $1,389,813 |
| 2. Actuarial value of assets | 1,432,878 | 1,383,010 |
| 3. Unfunded accrued liability *(1. – 2.)* | 19,038 | 6,803 |
| 4. Funded percentage *(2. ÷ 1.)* | 99% | 100% |
| 5. Combined valuation payroll | $508,435 | $503,210 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 4% | 1% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($288,045) | ($23,738) | ($22,033) | ($286,340) | ($24,628) |
| December 31, 2009 | $308,135 | $23,539 | $23,649 | $308,245 | $24,422 |
| December 31, 2011 | N/A | N/A | N/A | ($2,867) | ($212) |
| **Total** | | | | **$19,038** | **($418)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,389,813 |
| b. Normal cost at December 31, 2010 | 26,441 |
| c. Benefit payments during 2011 | (16,252) |
| d. Interest at 8.0% to December 31, 2011 | 112,650 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,512,652 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,512,652 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,451,916 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 60,736 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,383,010 |
| b. Contributions for 2011[1] | 30,374 |
| c. Benefit payments and expenses during 2011 | (16,360) |
| d. Interest at 8.0% to December 31, 2011 | 111,201 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,508,226 |
| 5. Actuarial value of assets at December 31, 2011 | 1,432,878 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (75,347) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($14,611)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$6,803** |
| 2. Expected increase | (2,376) |
| 3. Liability (gain)/loss | (60,736) |
| 4. Asset (gain)/loss | 75,347 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$19,038** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 3,081 | 179,029 | 1.72% | 3,028 | 164,124 | 1.84% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 18,478 | 175,758 | 10.51% | 23,413 | 194,486 | 12.04% |
| **Total** | **$21,559** | **$354,787** | **6.08%** | **$26,441** | **$358,610** | **7.37%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $19,038 | $6,803 |
| 2. Next year's Tier 1/Tier 2 UAL payment | (418) | (1,180) |
| 3. Combined valuation payroll | 508,435 | 503,210 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (0.08%) | (0.23%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.08% | 7.37% |
| b. Tier 1/Tier 2 UAL rate | (0.08%) | (0.23%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 6.13% | 7.26% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 7.31% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.31% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.46% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 99% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.31% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 10.31% |
| 7. July 1, 2013 total pension rate, before adjustment | 6.13% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (0.08%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.08%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 6.13% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 6.08% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 6.08% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 6.13% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.08% | 7.37% |
| b. Tier 1/Tier 2 UAL rate | (0.08%) | (0.23%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 6.13% | 7.26% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $179,029 | $0 | $179,029 |
| Tier 2 | 175,758 | 0 | 175,758 |
| Tier 1/Tier 2 valuation payroll | 354,787 | 0 | 354,787 |
| OPSRP valuation payroll | 153,648 | 0 | 153,648 |
| **Combined valuation payroll** | **$508,435** | **$0** | **$508,435** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 3 | 5 | 6 | 14 | 3 | 6 | 5 | 14 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 5 | 6 | 14 | 3 | 6 | 5 | 14 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 1 | 1 | N/A | 2 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 1 | 1 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 0 | 0 | 4 | 4 | 0 | 0 | 4 |
| **Grand Total Number of Members** | **8** | **6** | **6** | **20** | **9** | **8** | **5** | **22** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | 1 | | | | | | | **1** |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | | | 1 | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | 1 | | | | | **1** |
| **60-64** | | 1 | | | | | 1 | | | **2** |
| **65-69** | | 1 | 1 | | | | | | | **2** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **3** | **2** | **1** | **1** | | **1** | | | **8** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| **Age** | **Count** | **Average Deferred Monthly Benefit** |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 2 | 539 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 2 | 539 |

**Retired Members and Beneficiaries**

| **Age** | **Count** | **Average Monthly Benefit** |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 1 | 19 |
| **65-69** | 1 | 80 |
| **70-74** | 1 | 240 |
| **75-79** | 1 | 1,575 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 4 | 479 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Sisters-Camp Sherman Rural Fire Protection District/2701
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Sisters-Camp Sherman Rural Fire Protection District/2701

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Sisters-Camp Sherman Rural Fire Protection District/2701

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Sisters-Camp Sherman Rural Fire Protection District -- #2701

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Sisters-Camp Sherman Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Sisters-Camp Sherman Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Sisters-Camp Sherman Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 14.36% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 6.43% | 6.43% | 6.43% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **20.94%** | **12.85%** | **15.58%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **21.53%** | **13.34%** | **16.07%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 73%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 20.79% | 20.79% |
| Minimum July 1, 2015 Rate | 16.63% | 12.47% |
| Maximum July 1, 2015 Rate | 24.95% | 29.11% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 22 | 30 |
| Amortization factor | 14.525 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 17.55% | 1.62% | 1.62% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 20.79% | 6.43% | 6.43% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,760,967 | $1,456,686 | ($304,281) | 121% | $711,084 | (43%) |
| 12/31/2007 | 2,019,549 | 1,667,172 | (352,377) | 121% | 931,988 | (38%) |
| 12/31/2008 | 1,573,874 | 1,825,782 | 251,908 | 86% | 1,024,272 | 25% |
| 12/31/2009 | 1,935,927 | 2,233,819 | 297,892 | 87% | 1,135,656 | 26% |
| 12/31/2010 | 2,273,163 | 2,884,837 | 611,674 | 79% | 1,269,035 | 48% |
| 12/31/2011 | 2,164,565 | 2,972,903 | 808,338 | 73% | 879,705 | 92% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Sisters-Camp Sherman Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $808,338 | $611,674 |
| Allocated pooled OPSRP UAL | 15,010 | 15,757 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 823,348 | 627,431 |
| Combined valuation payroll | 879,705 | 1,269,035 |
| Net pension UAL as a percentage of payroll | 94% | 49% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $22,789 | $45,658 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $95,051 | $153,271 |
| Tier 1/Tier 2 valuation payroll | 661,782 | 929,613 |
| Tier 1/Tier 2 pension normal cost rate | 14.36% | 16.49% |
| Tier 1/ Tier 2 Actuarial accrued liability | $2,972,903 | $2,884,837 |
| Actuarial asset value | 2,164,565 | 2,273,163 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 808,338 | 611,674 |
| Tier 1/ Tier 2 Funded status | 73% | 79% |
| Combined valuation payroll | $879,705 | $1,269,035 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 92% | 48% |
| Tier 1/Tier 2 UAL rate | 6.43% | 2.44% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 7 | 9 |
| Tier 1/Tier 2 dormant members | 1 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 879,705 | 1,269,035 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $241,004 | $363,815 |
| 2. Employer reserves | 1,217,371 | 1,789,296 |
| 3. Benefits in force reserve | 706,190 | 120,052 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$2,164,565** | **$2,273,163** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $2,273,163 |
| 2. | Regular employer contributions | 119,994 |
| 3. | Benefit payments and expenses | (118,317) |
| 4. | Adjustments[2] | (171,484) |
| 5. | Interest credited | 61,209 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,164,565** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $56,767 | $112,426 |
| Tier 1 General Service | 8,032 | 9,306 |
| Tier 2 Police & Fire | 26,841 | 28,685 |
| Tier 2 General Service | 3,411 | 2,854 |
| **Total** | **$95,051** | **$153,271** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $95,051 | $95,051 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $934,117 | $1,439,072 |
| ▪ Tier 1 General Service | 195,642 | 192,937 |
| ▪ Tier 2 Police & Fire | 370,546 | 351,537 |
| ▪ Tier 2 General Service | 29,097 | 21,886 |
| ▪ **Total Active Members** | **$1,529,402** | **$2,005,432** |
| Dormant Members | 159,128 | 681,732 |
| Retired Members and Beneficiaries | 1,284,373 | 197,673 |
| **Total Actuarial Accrued Liability** | **$2,972,903** | **$2,884,837** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $2,972,903 | $2,972,903 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $2,972,903 | $2,884,837 |
| 2. Actuarial value of assets | 2,164,565 | 2,273,163 |
| 3. Unfunded accrued liability *(1. – 2.)* | 808,338 | 611,674 |
| 4. Funded percentage *(2. ÷ 1.)* | 73% | 79% |
| 5. Combined valuation payroll | $879,705 | $1,269,035 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 92% | 48% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($390,947) | ($32,217) | ($29,904) | ($388,634) | ($33,425) |
| December 31, 2009 | $691,931 | $52,856 | $53,104 | $692,179 | $54,838 |
| December 31, 2011 | N/A | N/A | N/A | $504,793 | $37,279 |
| **Total** | | | | **$808,338** | **$58,692** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $2,884,837 |
| b. Normal cost at December 31, 2010 | 153,271 |
| c. Benefit payments during 2011 | (117,542) |
| d. Interest at 8.0% to December 31, 2011 | 238,347 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,158,913 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,158,913 |
| 2. Actuarial accrued liability at December 31, 2011 | 2,972,903 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 186,010 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 2,273,163 |
| b. Contributions for 2011[1] | 119,994 |
| c. Benefit payments and expenses during 2011 | (118,317) |
| d. Interest at 8.0% to December 31, 2011 | 181,920 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 2,456,760 |
| 5. Actuarial value of assets at December 31, 2011 | 2,164,565 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (292,195) |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($106,185)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$611,674** |
| 2. Expected increase | 90,479 |
| 3. Liability (gain)/loss | (186,010) |
| 4. Asset (gain)/loss | 292,195 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$808,338** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $56,767 | $336,355 | 16.88% | $112,426 | $604,891 | 18.59% |
| Tier 1 General Service | 8,032 | 65,178 | 12.32% | 9,306 | 66,054 | 14.09% |
| Tier 2 Police & Fire | 26,841 | 205,074 | 13.09% | 28,685 | 209,270 | 13.71% |
| Tier 2 General Service | 3,411 | 55,175 | 6.18% | 2,854 | 49,398 | 5.78% |
| **Total** | **$95,051** | **$661,782** | **14.36%** | **$153,271** | **$929,613** | **16.49%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $808,338 | $611,674 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 58,692 | 43,583 |
| 3. Combined valuation payroll | 879,705 | 1,269,035 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 6.67% | 3.43% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.36% | 16.49% |
| b. Tier 1/Tier 2 UAL rate | 6.67% | 3.43% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 21.16% | 20.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 15.52% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.52% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.10% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.10% |
| c. Funded percentage | 73% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 5.27% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 10.25% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 20.79% |
| 7. July 1, 2013 total pension rate, before adjustment | 21.16% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.37%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 6.67% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 6.30% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 20.79% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 14.36% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.36% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 20.79% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.36% | 16.49% |
| b. Tier 1/Tier 2 UAL rate | 6.30% | 2.32% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 20.79% | 18.93% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $65,178 | $336,355 | $401,533 |
| Tier 2 | 55,175 | 205,074 | 260,249 |
| Tier 1/Tier 2 valuation payroll | 120,353 | 541,429 | 661,782 |
| OPSRP valuation payroll | 0 | 217,923 | 217,923 |
| **Combined valuation payroll** | **$120,353** | **$759,352** | **$879,705** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 1 | 0 | 2 | 1 | 1 | 2 | 4 |
| Police & Fire | 3 | 2 | 3 | 8 | 5 | 2 | 4 | 11 |
| Total | 4 | 3 | 3 | 10 | 6 | 3 | 6 | 15 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| Total | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 4 | 1 | 0 | 5 | 2 | 1 | 0 | 3 |
| Total | 4 | 1 | 0 | 5 | 2 | 1 | 0 | 3 |
| **Grand Total Number of Members** | **9** | **5** | **4** | **18** | **9** | **5** | **6** | **20** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | 1 | | | | | | | **1** |
| **35-39** | | 1 | | 1 | | | | | | **2** |
| **40-44** | | | | | | | | | | |
| **45-49** | | 1 | | | | | | | | **1** |
| **50-54** | | | | 1 | | | | | | **1** |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | 1 | | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **2** | **1** | **4** | | | | | | **7** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | 2,383 |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 1 | 2,383 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 3,898 |
| **55-59** | 1 | 6 |
| **60-64** | 1 | 2,233 |
| **65-69** | 1 | 1,117 |
| **70-74** | 1 | 323 |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 5 | 1,515 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

South Lane County Fire and Rescue/2859
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
South Lane County Fire and Rescue/2859

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
South Lane County Fire and Rescue/2859

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### South Lane County Fire and Rescue -- #2859

**Secondary Employers**

2827 Creswell Rural Fire Protection District

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for South Lane County Fire and Rescue to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to South Lane County Fire and Rescue.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for South Lane County Fire and Rescue*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 16.78% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 4.08% | 4.08% | 4.08% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **21.01%** | **10.50%** | **13.23%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **21.60%** | **10.99%** | **13.72%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 48%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 20.86% | 20.86% |
| Minimum July 1, 2015 Rate | 16.69% | 12.52% |
| Maximum July 1, 2015 Rate | 25.03% | 29.20% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 19.17% | 3.44% | 3.44% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 21.76% | 4.98% | 4.98% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $633,974 | $743,586 | $109,612 | 85% | $1,196,501 | 9% |
| 12/31/2007 | 723,733 | 874,577 | 150,844 | 83% | 1,260,826 | 12% |
| 12/31/2008 | 632,523 | 1,172,823 | 540,300 | 54% | 1,219,019 | 44% |
| 12/31/2009 | 817,056 | 1,603,224 | 786,168 | 51% | 1,367,464 | 57% |
| 12/31/2010 | 943,572 | 1,891,427 | 947,855 | 50% | 1,483,211 | 64% |
| 12/31/2011 | 1,034,896 | 2,162,175 | 1,127,279 | 48% | 1,340,704 | 84% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *South Lane County Fire and Rescue*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,127,279 | $947,855 |
| Allocated pooled OPSRP UAL | 22,876 | 18,416 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,150,155 | 966,271 |
| Combined valuation payroll | 1,340,704 | 1,483,211 |
| Net pension UAL as a percentage of payroll | 86% | 65% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $34,732 | $53,364 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $119,646 | $130,328 |
| Tier 1/Tier 2 valuation payroll | 713,018 | 880,179 |
| Tier 1/Tier 2 pension normal cost rate | 16.78% | 14.81% |
| Tier 1/ Tier 2 Actuarial accrued liability | $2,162,175 | $1,891,427 |
| Actuarial asset value | 1,034,896 | 943,572 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,127,279 | 947,855 |
| Tier 1/ Tier 2 Funded status | 48% | 50% |
| Combined valuation payroll | $1,340,704 | $1,483,211 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 84% | 64% |
| Tier 1/Tier 2 UAL rate | 4.08% | 4.99% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 8 | 10 |
| Tier 1/Tier 2 dormant members | 7 | 4 |
| Tier 1/Tier 2 retirees and beneficiaries | 4 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,340,704 | 1,483,211 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $73,302 | $75,085 |
| 2. Employer reserves | 797,276 | 694,683 |
| 3. Benefits in force reserve | 164,318 | 173,804 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$1,034,896** | **$943,572** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $943,572 |
| 2. Regular employer contributions | 90,265 |
| 3. Benefit payments and expenses | (27,530) |
| 4. Adjustments[2] | 6,680 |
| 5. Interest credited | 21,909 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,034,896** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $88,043 | $83,368 |
| Tier 1 General Service | 7,207 | 7,014 |
| Tier 2 Police & Fire | 24,396 | 39,946 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$119,646** | **$130,328** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $119,646 | $119,646 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $932,402 | $1,021,683 |
| ▪ Tier 1 General Service | 51,304 | 44,275 |
| ▪ Tier 2 Police & Fire | 329,983 | 514,300 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$1,313,689** | **$1,580,258** |
| Dormant Members | 549,635 | 24,991 |
| Retired Members and Beneficiaries | 298,851 | 286,178 |
| **Total Actuarial Accrued Liability** | **$2,162,175** | **$1,891,427** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $2,162,175 | $2,162,175 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $2,162,175 | $1,891,427 |
| 2. Actuarial value of assets | 1,034,896 | 943,572 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,127,279 | 947,855 |
| 4. Funded percentage *(2. ÷ 1.)* | 48% | 50% |
| 5. Combined valuation payroll | $1,340,704 | $1,483,211 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 84% | 64% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $49,576 | $4,086 | $3,792 | $49,282 | $4,239 |
| December 31, 2009 | $738,677 | $56,428 | $56,692 | $738,941 | $58,544 |
| December 31, 2011 | N/A | N/A | N/A | $339,056 | $25,039 |
| **Total** | | | | **$1,127,279** | **$87,822** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,891,427 |
| b. Normal cost at December 31, 2010 | 130,328 |
| c. Benefit payments during 2011 | (27,350) |
| d. Interest at 8.0% to December 31, 2011 | 160,646 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 2,155,051 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 2,155,051 |
| 2. Actuarial accrued liability at December 31, 2011 | 2,162,175 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (7,124) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 943,572 |
| b. Contributions for 2011[1] | 90,265 |
| c. Benefit payments and expenses during 2011 | (27,530) |
| d. Interest at 8.0% to December 31, 2011 | 77,995 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,084,302 |
| 5. Actuarial value of assets at December 31, 2011 | 1,034,896 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (49,406) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($56,530)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$947,855** |
| 2. Expected increase | 122,894 |
| 3. Liability (gain)/loss | 7,124 |
| 4. Asset (gain)/loss | 49,406 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,127,279** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $88,043 | $483,429 | 18.21% | $83,368 | $572,712 | 14.56% |
| Tier 1 General Service | 7,207 | 54,332 | 13.26% | 7,014 | 53,617 | 13.08% |
| Tier 2 Police & Fire | 24,396 | 175,257 | 13.92% | 39,946 | 253,850 | 15.74% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$119,646** | **$713,018** | **16.78%** | **$130,328** | **$880,179** | **14.81%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,127,279 | $947,855 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 87,822 | 72,301 |
| 3. Combined valuation payroll | 1,340,704 | 1,483,211 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 6.55% | 4.87% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.78% | 14.81% |
| b. Tier 1/Tier 2 UAL rate | 6.55% | 4.87% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 23.46% | 19.80% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 14.86% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.86% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.97% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 48% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.86% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 20.86% |
| 7. | July 1, 2013 total pension rate, before adjustment | 23.46% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (2.60%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 6.55% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.95% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 20.86% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 16.78% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 16.78% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 20.86% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 16.78% | 14.81% |
| b. Tier 1/Tier 2 UAL rate | 3.95% | 4.87% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 20.86% | 19.80% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $54,332 | $483,429 | $537,761 |
| Tier 2 | 0 | 175,257 | 175,257 |
| Tier 1/Tier 2 valuation payroll | 54,332 | 658,686 | 713,018 |
| OPSRP valuation payroll | 46,234 | 581,452 | 627,686 |
| **Combined valuation payroll** | **$100,566** | **$1,240,138** | **$1,340,704** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 |
| Police & Fire | 5 | 2 | 8 | 15 | 6 | 3 | 7 | 16 |
| Total | 6 | 2 | 9 | 17 | 7 | 3 | 8 | 18 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 1 | 3 | N/A | 4 | 2 | 4 | N/A | 6 |
| Total | 1 | 3 | N/A | 4 | 2 | 4 | N/A | 6 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 2 |
| Police & Fire | 3 | 3 | 0 | 6 | 2 | 0 | 0 | 2 |
| Total | 3 | 4 | 0 | 7 | 2 | 2 | 0 | 4 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 4 | 0 | 0 | 4 | 3 | 0 | 0 | 3 |
| Total | 4 | 0 | 0 | 4 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **14** | **9** | **9** | **32** | **14** | **9** | **8** | **31** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | 1 | | | | | | | **1** |
| **35-39** | | | | 1 | | | | | | **1** |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | | | | 1 | | | | | **1** |
| **50-54** | | | | | 1 | | | | | **1** |
| **55-59** | | | | | 2 | | | | | **2** |
| **60-64** | | | | | 1 | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **2** | **1** | **5** | | | | | **8** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 1 | 113 |
| **40-44** | 1 | 206 |
| **45-49** | | |
| **50-54** | 3 | 744 |
| **55-59** | 1 | 123 |
| **60-64** | 1 | 1,791 |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 7 | 638 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | 1 | 364 |
| **55-59** | 2 | 516 |
| **60-64** | 1 | 378 |
| **65-69** | | |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 4 | 444 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Southwestern Polk County Rural Fire Protection District/2803
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Southwestern Polk County Rural Fire Protection District/2803

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Southwestern Polk County Rural Fire Protection District -- #2803

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Southwestern Polk County Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Southwestern Polk County Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Southwestern Polk County Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.82% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.20%) | (2.20%) | (2.20%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **8.77%** | **4.22%** | **6.95%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **9.36%** | **4.71%** | **7.44%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 113%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 8.62% | 8.62% |
| Minimum July 1, 2015 Rate | 5.62% | 2.62% |
| Maximum July 1, 2015 Rate | 11.62% | 14.62% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 11 | 16 |
| Amortization factor | 8.695 | 11.713 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 6.53% | (3.61%) | (3.61%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.62% | (2.20%) | (2.20%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $84,979 | $50,157 | ($34,823) | 169% | $14,830 | (235%) |
| 12/31/2007 | 91,868 | 61,210 | (30,658) | 150% | 33,405 | (92%) |
| 12/31/2008 | 65,605 | 60,353 | (5,252) | 109% | 33,525 | (16%) |
| 12/31/2009 | 74,517 | 59,350 | (15,167) | 126% | 34,630 | (44%) |
| 12/31/2010 | 80,618 | 58,861 | (21,757) | 137% | 36,315 | (60%) |
| 12/31/2011 | 67,029 | 59,440 | (7,589) | 113% | 36,767 | (21%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Southwestern Polk County Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($7,589) | ($21,757) |
| Allocated pooled OPSRP UAL | 627 | 451 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (6,962) | (21,306) |
| Combined valuation payroll | 36,767 | 36,315 |
| Net pension UAL as a percentage of payroll | (19%) | (59%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $952 | $1,307 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $0 | $0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| Tier 1/ Tier 2 Actuarial accrued liability | $59,440 | $58,861 |
| Actuarial asset value | 67,029 | 80,618 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (7,589) | (21,757) |
| Tier 1/ Tier 2 Funded status | 113% | 137% |
| Combined valuation payroll | $36,767 | $36,315 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (21%) | (60%) |
| Tier 1/Tier 2 UAL rate | (2.20%) | (4.94%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 0 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 36,767 | 36,315 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $0 | $15,221 |
| 2. Employer reserves | 34,347 | 58,533 |
| 3. Benefits in force reserve | 32,682 | 6,864 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$67,029** | **$80,618** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $80,618 |
| 2. Regular employer contributions | (1,619) |
| 3. Benefit payments and expenses | (5,476) |
| 4. Adjustments [2] | (9,745) |
| 5. Interest credited | 3,251 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$67,029** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$0** | **$0** |
| Dormant Members | 0 | 47,558 |
| Retired Members and Beneficiaries | 59,440 | 11,303 |
| **Total Actuarial Accrued Liability** | **$59,440** | **$58,861** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $59,440 | $59,440 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $59,440 | $58,861 |
| 2. Actuarial value of assets | 67,029 | 80,618 |
| 3. Unfunded accrued liability *(1. – 2.)* | (7,589) | (21,757) |
| 4. Funded percentage *(2. ÷ 1.)* | 113% | 137% |
| 5. Combined valuation payroll | $36,767 | $36,315 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (21%) | (60%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($31,730) | ($2,616) | ($2,427) | ($31,541) | ($2,714) |
| December 31, 2009 | $16,696 | $1,275 | $1,281 | $16,702 | $1,323 |
| December 31, 2011 | N/A | N/A | N/A | $7,250 | $535 |
| **Total** | | | | **($7,589)** | **($856)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $58,861 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | (5,440) |
| d. Interest at 8.0% to December 31, 2011 | 4,491 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 57,912 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 57,912 |
| 2. Actuarial accrued liability at December 31, 2011 | 59,440 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (1,528) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 80,618 |
| b. Contributions for 2011[1] | (1,619) |
| c. Benefit payments and expenses during 2011 | (5,476) |
| d. Interest at 8.0% to December 31, 2011 | 6,166 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 79,689 |
| 5. Actuarial value of assets at December 31, 2011 | 67,029 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (12,660) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($14,188)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($21,757)** |
| 2. Expected increase | (20) |
| 3. Liability (gain)/loss | 1,528 |
| 4. Asset (gain)/loss | 12,660 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($7,589)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$0** | **$0** | **10.82%** | **$0** | **$0** | **10.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($7,589) | ($21,757) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (856) | (1,837) |
| 3. Combined valuation payroll | 36,767 | 36,315 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.33%) | (5.06%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | (2.33%) | (5.06%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 8.62% | 5.36% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 6.53% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 6.53% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.31% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 113% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 3.53% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 9.53% |
| 7. | July 1, 2013 total pension rate, before adjustment | 8.62% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.33%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.33%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 8.62% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.82% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.82% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 8.62% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | (2.33%) | (5.06%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 8.62% | 5.36% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 | 0 |
| OPSRP valuation payroll | 36,767 | 0 | 36,767 |
| **Combined valuation payroll** | **$36,767** | **$0** | **$36,767** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Total | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 1 |
| **Grand Total Number of Members** | **0** | **2** | **1** | **3** | **0** | **2** | **1** | **3** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 79 |
| 65-69 | 1 | 332 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 2 | 206 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Springfield Utility Board/2767
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Springfield Utility Board/2767

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Springfield Utility Board -- #2767

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Springfield Utility Board to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Springfield Utility Board.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Springfield Utility Board*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 3.29% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 2.12% | 2.12% | 2.12% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **8.54%** | **11.27%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **9.03%** | **11.76%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 96%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 6 | 4 |
| Amortization factor | 5.292 | 3.678 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.02% | 5.68% | 5.68% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | 2.12% | 2.12% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $177,480 | $174,695 | ($2,785) | 102% | $64,350 | (4%) |
| 12/31/2007 | 198,276 | 187,462 | (10,814) | 106% | 66,481 | (16%) |
| 12/31/2008 | 167,787 | 198,236 | 30,449 | 85% | 68,162 | 45% |
| 12/31/2009 | 204,111 | 219,285 | 15,174 | 93% | 78,307 | 19% |
| 12/31/2010 | 234,185 | 240,917 | 6,732 | 97% | 77,075 | 9% |
| 12/31/2011 | 248,311 | 257,708 | 9,397 | 96% | 79,824 | 12% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Springfield Utility Board*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $9,397 | $6,732 |
| Allocated pooled OPSRP UAL | 1,362 | 957 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 10,759 | 7,689 |
| Combined valuation payroll | 79,824 | 77,075 |
| Net pension UAL as a percentage of payroll | 13% | 10% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,068 | $2,773 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $2,313 | $1,094 |
| Tier 1/Tier 2 valuation payroll | 79,824 | 77,075 |
| Tier 1/Tier 2 pension normal cost rate | 3.29% | 1.74% |
| Tier 1/ Tier 2 Actuarial accrued liability | $257,708 | $240,917 |
| Actuarial asset value | 248,311 | 234,185 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 9,397 | 6,732 |
| Tier 1/ Tier 2 Funded status | 96% | 97% |
| Combined valuation payroll | $79,824 | $77,075 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 12% | 9% |
| Tier 1/Tier 2 UAL rate | 2.12% | 3.60% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### OPSRP

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### Retiree Healthcare

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 79,824 | 77,075 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $89,522 | $86,084 |
| 2. Employer reserves | 158,789 | 148,101 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$248,311** | **$234,185** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $234,185 |
| 2. | Regular employer contributions | 7,268 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | (1,254) |
| 5. | Interest credited | 8,112 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$248,311** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 2,313 | 1,094 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$2,313** | **$1,094** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $2,313 | $2,313 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 257,708 | 240,917 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$257,708** | **$240,917** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$257,708** | **$240,917** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $257,708 | $257,708 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $257,708 | $240,917 |
| 2. Actuarial value of assets | 248,311 | 234,185 |
| 3. Unfunded accrued liability *(1. – 2.)* | 9,397 | 6,732 |
| 4. Funded percentage *(2. ÷ 1.)* | 96% | 97% |
| 5. Combined valuation payroll | $79,824 | $77,075 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 12% | 9% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($38,855) | ($3,204) | ($2,972) | ($38,623) | ($3,324) |
| December 31, 2009 | $54,294 | $4,148 | $4,167 | $54,313 | $4,304 |
| December 31, 2011 | N/A | N/A | N/A | ($6,293) | ($465) |
| **Total** | | | | **$9,397** | **$515** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $240,917 |
| b. Normal cost at December 31, 2010 | 1,094 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 19,361 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 261,372 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 261,372 |
| 2. Actuarial accrued liability at December 31, 2011 | 257,708 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 3,664 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 234,185 |
| b. Contributions for 2011[1] | 7,268 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 19,025 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 260,478 |
| 5. Actuarial value of assets at December 31, 2011 | 248,311 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (12,167) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($8,503)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$6,732** |
| 2. Expected increase | (5,838) |
| 3. Liability (gain)/loss | (3,664) |
| 4. Asset (gain)/loss | 12,167 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$9,397** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 2,313 | 79,824 | 2.90% | 1,094 | 77,075 | 1.42% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$2,313** | **$79,824** | **2.90%** | **$1,094** | **$77,075** | **1.42%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $9,397 | $6,732 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 515 | 301 |
| 3. Combined valuation payroll | 79,824 | 77,075 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.65% | 0.39% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 2.90% | 1.42% |
| b. Tier 1/Tier 2 UAL rate | 0.65% | 0.39% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 3.68% | 1.93% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.02% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.02% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.60% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 96% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.02% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.02% |
| 7. July 1, 2013 total pension rate, before adjustment | 3.68% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 1.34% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.65% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 1.99% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 5.02% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.39% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 2.90% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 3.29% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 3.29% | 1.74% |
| b. Tier 1/Tier 2 UAL rate | 1.99% | 3.48% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $79,824 | $0 | $79,824 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 79,824 | 0 | 79,824 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$79,824** | **$0** | **$79,824** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **1** | **0** | **0** | **1** | **1** | **0** | **0** | **1** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | 1 | | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | | **1** | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Sunrise Water Authority/2845
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Sunrise Water Authority/2845

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Scott Preppernau

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

INDEPENDENT EMPLOYERS

Sunrise Water Authority -- #2845

### Secondary Employers

| | |
|---|---|
| 2586 | Mt Scott Water District |
| 2656 | Damascus Water District |

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Sunrise Water Authority to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Sunrise Water Authority.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Sunrise Water Authority*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.61% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 8.70% | 8.70% | 8.70% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.46%** | **15.12%** | **17.85%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.05%** | **15.61%** | **18.34%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 68%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.31% | 16.31% |
| Minimum July 1, 2015 Rate | 13.05% | 9.79% |
| Maximum July 1, 2015 Rate | 19.57% | 22.83% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 21 | 30 |
| Amortization factor | 13.881 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.98% | 5.22% | 5.22% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.31% | 8.70% | 8.70% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $3,679,008 | $3,468,747 | ($210,260) | 106% | $1,255,555 | (17%) |
| 12/31/2007 | 4,098,548 | 3,697,138 | (401,410) | 111% | 1,531,271 | (26%) |
| 12/31/2008 | 3,054,311 | 3,881,452 | 827,141 | 79% | 1,158,722 | 71% |
| 12/31/2009 | 2,864,075 | 3,700,299 | 836,224 | 77% | 948,066 | 88% |
| 12/31/2010 | 3,071,750 | 3,823,574 | 751,824 | 80% | 931,592 | 81% |
| 12/31/2011 | 2,709,139 | 3,974,445 | 1,265,306 | 68% | 1,060,987 | 119% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Sunrise Water Authority*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,265,306 | $751,824 |
| Allocated pooled OPSRP UAL | 18,103 | 11,567 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,283,409 | 763,391 |
| Combined valuation payroll | 1,060,987 | 931,592 |
| Net pension UAL as a percentage of payroll | 121% | 82% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $27,485 | $33,517 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $31,946 | $37,629 |
| Tier 1/Tier 2 valuation payroll | 420,033 | 530,319 |
| Tier 1/Tier 2 pension normal cost rate | 7.61% | 7.10% |
| Tier 1/ Tier 2 Actuarial accrued liability | $3,974,445 | $3,823,574 |
| Actuarial asset value | 2,709,139 | 3,071,750 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,265,306 | 751,824 |
| Tier 1/ Tier 2 Funded status | 68% | 80% |
| Combined valuation payroll | $1,060,987 | $931,592 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 119% | 81% |
| Tier 1/Tier 2 UAL rate | 8.70% | 5.93% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 6 | 7 |
| Tier 1/Tier 2 dormant members | 7 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 15 | 14 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 1,060,987 | 931,592 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $289,295 | $532,147 |
| 2. Employer reserves | 748,324 | 1,123,570 |
| 3. Benefits in force reserve | 1,671,520 | 1,416,033 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$2,709,139** | **$3,071,750** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $3,071,750 |
| 2. | Regular employer contributions | 69,430 |
| 3. | Benefit payments and expenses | (280,052) |
| 4. | Adjustments [2] | (228,166) |
| 5. | Interest credited | 76,177 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$2,709,139** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 5,139 | 14,659 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 26,807 | 22,970 |
| **Total** | **$31,946** | **$37,629** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $31,946 | $31,946 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 337,913 | 935,149 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 406,474 | 349,680 |
| ▪ **Total Active Members** | **$744,387** | **$1,284,829** |
| Dormant Members | 190,004 | 207,172 |
| Retired Members and Beneficiaries | 3,040,054 | 2,331,573 |
| **Total Actuarial Accrued Liability** | **$3,974,445** | **$3,823,574** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $3,974,445 | $3,974,445 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $3,974,445 | $3,823,574 |
| 2. Actuarial value of assets | 2,709,139 | 3,071,750 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,265,306 | 751,824 |
| 4. Funded percentage *(2. ÷ 1.)* | 68% | 80% |
| 5. Combined valuation payroll | $1,060,987 | $931,592 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 119% | 81% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($592,216) | ($48,805) | ($45,300) | ($588,711) | ($50,635) |
| December 31, 2009 | $1,434,282 | $109,564 | $110,079 | $1,434,797 | $113,673 |
| December 31, 2011 | N/A | N/A | N/A | $419,220 | $30,959 |
| **Total** | | | | **$1,265,306** | **$93,997** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $3,823,574 |
| b. Normal cost at December 31, 2010 | 37,629 |
| c. Benefit payments during 2011 | (278,216) |
| d. Interest at 8.0% to December 31, 2011 | 297,768 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 3,880,755 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 3,880,755 |
| 2. Actuarial accrued liability at December 31, 2011 | 3,974,445 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (93,690) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 3,071,750 |
| b. Contributions for 2011[1] | 69,430 |
| c. Benefit payments and expenses during 2011 | (280,052) |
| d. Interest at 8.0% to December 31, 2011 | 237,315 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 3,098,443 |
| 5. Actuarial value of assets at December 31, 2011 | 2,709,139 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (389,304) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($482,994)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$751,824** |
| 2. Expected increase | 30,488 |
| 3. Liability (gain)/loss | 93,690 |
| 4. Asset (gain)/loss | 389,304 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,265,306** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 5,139 | 118,356 | 4.34% | 14,659 | 251,140 | 5.84% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 26,807 | 301,677 | 8.89% | 22,970 | 279,179 | 8.23% |
| **Total** | **$31,946** | **$420,033** | **7.61%** | **$37,629** | **$530,319** | **7.10%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,265,306 | $751,824 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 93,997 | 54,095 |
| 3. Combined valuation payroll | 1,060,987 | 931,592 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 8.86% | 5.81% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.61% | 7.10% |
| b. Tier 1/Tier 2 UAL rate | 8.86% | 5.81% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.60% | 13.03% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 10.31% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.31% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.06% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 68% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 4.31% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 16.31% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.60% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (0.29%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 8.86% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 8.57% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.31% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 7.61% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.61% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.31% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.61% | 7.10% |
| b. Tier 1/Tier 2 UAL rate | 8.57% | 5.81% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.31% | 13.03% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $118,356 | $0 | $118,356 |
| Tier 2 | 301,677 | 0 | 301,677 |
| Tier 1/Tier 2 valuation payroll | 420,033 | 0 | 420,033 |
| OPSRP valuation payroll | 640,954 | 0 | 640,954 |
| **Combined valuation payroll** | **$1,060,987** | **$0** | **$1,060,987** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 2 | 4 | 11 | 17 | 3 | 4 | 9 | 16 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 4 | 11 | 17 | 3 | 4 | 9 | 16 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 2 | 1 | N/A | 3 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 2 | 1 | N/A | 3 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 4 | 3 | 0 | 7 | 3 | 3 | 0 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 4 | 3 | 0 | 7 | 3 | 3 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 15 | 0 | 0 | 15 | 14 | 0 | 0 | 14 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 15 | 0 | 0 | 15 | 14 | 0 | 0 | 14 |
| **Grand Total Number of Members** | **23** | **8** | **11** | **42** | **20** | **7** | **9** | **36** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | 1 | | | | | | | 1 |
| 35-39 | | | | | | | | | | |
| 40-44 | | | 2 | 1 | | | | | | 3 |
| 45-49 | | | | | 1 | | | | | 1 |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | 1 | | | | | | | | 1 |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | 1 | 3 | 1 | 1 | | | | | 6 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | 1,125 |
| 45-49 | 2 | 971 |
| 50-54 | 2 | |
| 55-59 | 2 | 286 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 7 | 520 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 4,217 |
| 60-64 | 2 | 1,160 |
| 65-69 | 4 | 1,221 |
| 70-74 | 3 | 1,531 |
| 75-79 | 2 | 1,940 |
| 80-84 | 1 | 1,100 |
| 85-89 | 2 | 602 |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 15 | 1,480 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Sweet Home Cemetery/2643
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
Sweet Home Cemetery/2643

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Sweet Home Cemetery/2643

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Sweet Home Cemetery -- #2643

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Sweet Home Cemetery to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Sweet Home Cemetery.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Sweet Home Cemetery*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 0.00% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 20.67% | 20.67% | 20.67% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **20.82%** | **27.09%** | **29.82%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **21.41%** | **27.58%** | **30.31%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 69%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 20.67% | 20.67% |
| Minimum July 1, 2015 Rate | 16.54% | 12.41% |
| Maximum July 1, 2015 Rate | 24.80% | 28.93% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 15 |
| Amortization factor | 17.175 | 11.230 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.67% | 11.56% | 11.56% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 34.36% | 34.36% | 34.36% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $492,427 | $564,237 | $71,809 | 87% | $100,122 | 72% |
| 12/31/2007 | 539,747 | 600,033 | 60,286 | 90% | 103,589 | 58% |
| 12/31/2008 | 456,186 | 624,677 | 168,491 | 73% | 106,308 | 158% |
| 12/31/2009 | 542,212 | 681,951 | 139,739 | 80% | 108,913 | 128% |
| 12/31/2010 | 612,989 | 739,059 | 126,070 | 83% | 111,990 | 113% |
| 12/31/2011 | 350,642 | 511,257 | 160,615 | 69% | 27,288 | 589% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Sweet Home Cemetery*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31 2011 | December 31 2010 |
| T1/T2 UAL | $160,615 | $126,070 |
| Allocated pooled OPSRP UAL | 466 | 1,390 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 161,081 | 127,460 |
| Combined valuation payroll | 27,288 | 111,990 |
| Net pension UAL as a percentage of payroll | 590% | 114% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $707 | $4,029 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $0 | $3,543 |
| Tier 1/Tier 2 valuation payroll | 27,288 | 111,990 |
| Tier 1/Tier 2 pension normal cost rate | 0.00% | 3.16% |
| Tier 1/ Tier 2 Actuarial accrued liability | $511,257 | $739,059 |
| Actuarial asset value | 350,642 | 612,989 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 160,615 | 126,070 |
| Tier 1/ Tier 2 Funded status | 69% | 83% |
| Combined valuation payroll | $27,288 | $111,990 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 589% | 113% |
| Tier 1/Tier 2 UAL rate | 20.67% | 8.82% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 3 |
| Tier 1/Tier 2 dormant members | 1 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| ($ in millions) | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 27,288 | 111,990 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $62,240 | $266,043 |
| 2. Employer reserves | 112,512 | 322,781 |
| 3. Benefits in force reserve | 175,890 | 24,165 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$350,642** | **$612,989** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $612,989 |
| 2. | Regular employer contributions | 12,123 |
| 3. | Benefit payments and expenses | (29,469) |
| 4. | Adjustments[2] | (266,782) |
| 5. | Interest credited | 21,782 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$350,642** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 27 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 3,516 |
| **Total** | **$0** | **$3,543** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 139,965 | 652,775 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 46,496 |
| ▪ **Total Active Members** | **$139,965** | **$699,271** |
| Dormant Members | 51,393 | 0 |
| Retired Members and Beneficiaries | 319,899 | 39,788 |
| **Total Actuarial Accrued Liability** | **$511,257** | **$739,059** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $511,257 | $511,257 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $511,257 | $739,059 |
| 2. Actuarial value of assets | 350,642 | 612,989 |
| 3. Unfunded accrued liability *(1. – 2.)* | 160,615 | 126,070 |
| 4. Funded percentage *(2. ÷ 1.)* | 69% | 83% |
| 5. Combined valuation payroll | $27,288 | $111,990 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 589% | 113% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $13,122 | $1,081 | $1,004 | $13,045 | $1,122 |
| December 31, 2009 | $126,964 | $9,699 | $9,744 | $127,009 | $10,063 |
| December 31, 2011 | N/A | N/A | N/A | $20,561 | $1,518 |
| **Total** | | | | **$160,615** | **$12,703** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $739,059 |
| b. Normal cost at December 31, 2010 | 3,543 |
| c. Benefit payments during 2011 | (29,276) |
| d. Interest at 8.0% to December 31, 2011 | 58,237 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 771,563 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 771,563 |
| 2. Actuarial accrued liability at December 31, 2011 | 511,257 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 260,306 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 612,989 |
| b. Contributions for 2011[1] | 12,123 |
| c. Benefit payments and expenses during 2011 | (29,469) |
| d. Interest at 8.0% to December 31, 2011 | 48,345 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 643,988 |
| 5. Actuarial value of assets at December 31, 2011 | 350,642 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (293,345) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($33,039)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$126,070** |
| 2. Expected increase | 1,506 |
| 3. Liability (gain)/loss | (260,306) |
| 4. Asset (gain)/loss | 293,345 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$160,615** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 27,288 | 0.00% | 27 | 83,066 | 0.03% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 3,516 | 28,924 | 12.16% |
| **Total** | **$0** | **$27,288** | **0.00%** | **$3,543** | **$111,990** | **3.16%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $160,615 | $126,070 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 12,703 | 9,745 |
| 3. Combined valuation payroll | 27,288 | 111,990 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 46.55% | 8.70% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 0.00% | 3.16% |
| b. Tier 1/Tier 2 UAL rate | 46.55% | 8.70% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 46.68% | 11.98% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 14.67% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.67% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.93% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 69% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 8.67% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 20.67% |
| 7. July 1, 2013 total pension rate, before adjustment | 46.68% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (26.01%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 46.55% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 20.54% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 20.67% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 0.00% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 0.00% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 20.67% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 0.00% | 3.16% |
| b. Tier 1/Tier 2 UAL rate | 20.54% | 8.70% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 20.67% | 11.98% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $27,288 | $0 | $27,288 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 27,288 | 0 | 27,288 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$27,288** | **$0** | **$27,288** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **3** | **1** | **0** | **4** | **3** | **1** | **0** | **4** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | 1 | | | | | | **1** |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | | | **1** | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 462 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 462 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 1,636 |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | 1 | 683 |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 2 | 1,160 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Tangent Rural Fire Protection District/2553
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Tangent Rural Fire Protection District/2553

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,


Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary


**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Tangent Rural Fire Protection District -- #2553

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Tangent Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tangent Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Tangent Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 0.04% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 36.58% | 36.58% | 36.58% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **36.77%** | **43.00%** | **45.73%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **37.36%** | **43.49%** | **46.22%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 68%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 36.62% | 36.62% |
| Minimum July 1, 2015 Rate | 29.30% | 21.98% |
| Maximum July 1, 2015 Rate | 43.94% | 51.26% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 19 | 30 |
| Amortization factor | 13.195 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 29.24% | 13.77% | 13.77% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 36.62% | 36.58% | 36.58% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $664,998 | $542,319 | ($122,678) | 123% | $105,594 | (116%) |
| 12/31/2007 | 800,139 | 873,095 | 72,956 | 92% | 67,715 | 108% |
| 12/31/2008 | 574,792 | 903,382 | 328,590 | 64% | 69,326 | 474% |
| 12/31/2009 | 645,068 | 927,816 | 282,748 | 70% | 120,311 | 235% |
| 12/31/2010 | 688,450 | 956,927 | 268,477 | 72% | 127,632 | 210% |
| 12/31/2011 | 684,224 | 1,012,596 | 328,372 | 68% | 68,245 | 481% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Tangent Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $328,372 | $268,477 |
| Allocated pooled OPSRP UAL | 1,164 | 1,585 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 329,536 | 270,062 |
| Combined valuation payroll | 68,245 | 127,632 |
| Net pension UAL as a percentage of payroll | 483% | 212% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,768 | $4,592 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $3 | $15,947 |
| Tier 1/Tier 2 valuation payroll | 7,866 | 68,177 |
| Tier 1/Tier 2 pension normal cost rate | 0.04% | 23.39% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,012,596 | $956,927 |
| Actuarial asset value | 684,224 | 688,450 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 328,372 | 268,477 |
| Tier 1/ Tier 2 Funded status | 68% | 72% |
| Combined valuation payroll | $68,245 | $127,632 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 481% | 210% |
| Tier 1/Tier 2 UAL rate | 36.58% | 12.19% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 68,245 | 127,632 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $89,356 | $84,754 |
| 2. Employer reserves | 231,915 | 207,540 |
| 3. Benefits in force reserve | 362,953 | 396,156 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$684,224** | **$688,450** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $688,450 |
| 2. Regular employer contributions | 19,384 |
| 3. Benefit payments and expenses | (60,810) |
| 4. Adjustments [2] | 19,663 |
| 5. Interest credited | 17,537 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$684,224** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $3 | $4 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 15,943 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$3** | **$15,947** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $3 | $3 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $124,017 | $118,452 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 228,463 | 186,183 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$352,480** | **$304,635** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 660,116 | 652,292 |
| **Total Actuarial Accrued Liability** | **$1,012,596** | **$956,927** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,012,596 | $1,012,596 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,012,596 | $956,927 |
| 2. Actuarial value of assets | 684,224 | 688,450 |
| 3. Unfunded accrued liability *(1. – 2.)* | 328,372 | 268,477 |
| 4. Funded percentage *(2. ÷ 1.)* | 68% | 72% |
| 5. Combined valuation payroll | $68,245 | $127,632 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 481% | 210% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $63,027 | $5,194 | $4,821 | $62,654 | $5,389 |
| December 31, 2009 | $220,217 | $16,822 | $16,901 | $220,296 | $17,453 |
| December 31, 2011 | N/A | N/A | N/A | $45,422 | $3,354 |
| **Total** | | | | **$328,372** | **$26,196** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $956,927 |
| b. Normal cost at December 31, 2010 | 15,947 |
| c. Benefit payments during 2011 | (60,412) |
| d. Interest at 8.0% to December 31, 2011 | 75,413 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 987,875 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 987,875 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,012,596 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (24,721) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 688,450 |
| b. Contributions for 2011[1] | 19,384 |
| c. Benefit payments and expenses during 2011 | (60,810) |
| d. Interest at 8.0% to December 31, 2011 | 53,419 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 700,443 |
| 5. Actuarial value of assets at December 31, 2011 | 684,224 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (16,219) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($40,940)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$268,477** |
| 2. Expected increase | 18,955 |
| 3. Liability (gain)/loss | 24,721 |
| 4. Asset (gain)/loss | 16,219 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$328,372** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $3 | $7,866 | 0.04% | $4 | $4,837 | 0.08% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 15,943 | 63,340 | 25.17% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$3** | **$7,866** | **0.04%** | **$15,947** | **$68,177** | **23.39%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $328,372 | $268,477 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 26,196 | 20,925 |
| 3. Combined valuation payroll | 68,245 | 127,632 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 38.39% | 16.39% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 0.04% | 23.39% |
| b. Tier 1/Tier 2 UAL rate | 38.39% | 16.39% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 38.56% | 39.90% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 26.16% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 26.16% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 5.23% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 5.23% |
| | c. Funded percentage | 68% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 10.46% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 15.70% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 36.62% |
| 7. | July 1, 2013 total pension rate, before adjustment | 38.56% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.94%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 38.39% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 36.45% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 36.62% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 0.04% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 0.04% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 36.62% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 0.04% | 23.39% |
| b. Tier 1/Tier 2 UAL rate | 36.45% | 12.07% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 36.62% | 35.58% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $7,866 | $7,866 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 7,866 | 7,866 |
| OPSRP valuation payroll | 0 | 60,379 | 60,379 |
| **Combined valuation payroll** | **$0** | **$68,245** | **$68,245** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| Total | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 2 | 0 | N/A | 2 | 3 | 0 | N/A | 3 |
| Total | 2 | 0 | N/A | 2 | 3 | 0 | N/A | 3 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| Total | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **5** | **1** | **1** | **7** | **6** | **1** | **1** | **8** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | 1 | | | | | | | **1** |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | 1 | 3,321 |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | 1 | 161 |
| 75-79 | | |
| 80-84 | 1 | 1,643 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 3 | 1,708 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Tillamook 9-1-1/2722
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Tillamook 9-1-1/2722

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

Tillamook 9-1-1 -- #2722

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Tillamook 9-1-1 to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tillamook 9-1-1.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Tillamook 9-1-1*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 7.72% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.31%) | (2.31%) | (2.31%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **4.11%** | **6.84%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **4.60%** | **7.33%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 108%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 23 | 30 |
| Amortization factor | 14.595 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 2.13% | (0.75%) | (0.75%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (2.31%) | (2.31%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,561,189 | $1,267,978 | ($293,211) | 123% | $489,138 | (60%) |
| 12/31/2007 | 1,723,801 | 1,367,483 | (356,318) | 126% | 511,057 | (70%) |
| 12/31/2008 | 1,378,769 | 1,363,027 | (15,742) | 101% | 482,292 | (3%) |
| 12/31/2009 | 1,613,075 | 1,537,544 | (75,531) | 105% | 522,840 | (14%) |
| 12/31/2010 | 1,755,810 | 1,582,886 | (172,924) | 111% | 488,423 | (35%) |
| 12/31/2011 | 1,800,706 | 1,660,388 | (140,318) | 108% | 561,258 | (25%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Tillamook 9-1-1*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31 2011 | December 31 2010 |
| T1/T2 UAL | ($140,318) | ($172,924) |
| Allocated pooled OPSRP UAL | 9,576 | 6,064 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (130,742) | (166,860) |
| Combined valuation payroll | 561,258 | 488,423 |
| Net pension UAL as a percentage of payroll | (23%) | (34%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $14,540 | $17,573 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $18,230 | $8,810 |
| Tier 1/Tier 2 valuation payroll | 287,009 | 244,492 |
| Tier 1/Tier 2 pension normal cost rate | 7.72% | 6.53% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,660,388 | $1,582,886 |
| Actuarial asset value | 1,800,706 | 1,755,810 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (140,318) | (172,924) |
| Tier 1/ Tier 2 Funded status | 108% | 111% |
| Combined valuation payroll | $561,258 | $488,423 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (25%) | (35%) |
| Tier 1/Tier 2 UAL rate | (2.31%) | (1.19%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 5 | 5 |
| Tier 1/Tier 2 dormant members | 4 | 6 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 2 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 561,258 | 488,423 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $548,299 | $532,601 |
| 2. Employer reserves | 1,099,728 | 1,072,346 |
| 3. Benefits in force reserve | 152,679 | 150,863 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$1,800,706** | **$1,755,810** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,755,810 |
| 2. | Regular employer contributions | 14,849 |
| 3. | Benefit payments and expenses | (25,580) |
| 4. | Adjustments[2] | (4,772) |
| 5. | Interest credited | 60,399 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,800,706** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 12,749 | 125 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 5,481 | 8,685 |
| **Total** | **$18,230** | **$8,810** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $18,230 | $18,230 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 1,017,009 | 954,916 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 114,113 | 96,819 |
| ▪ **Total Active Members** | **$1,131,122** | **$1,051,735** |
| Dormant Members | 251,584 | 282,747 |
| Retired Members and Beneficiaries | 277,682 | 248,404 |
| **Total Actuarial Accrued Liability** | **$1,660,388** | **$1,582,886** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $1,660,388 | $1,660,388 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,660,388 | $1,582,886 |
| 2. Actuarial value of assets | 1,800,706 | 1,755,810 |
| 3. Unfunded accrued liability *(1. – 2.)* | (140,318) | (172,924) |
| 4. Funded percentage *(2. ÷ 1.)* | 108% | 111% |
| 5. Combined valuation payroll | $561,258 | $488,423 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (25%) | (35%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($436,508) | ($35,972) | ($33,389) | ($433,925) | ($37,321) |
| December 31, 2009 | $363,202 | $27,745 | $27,875 | $363,332 | $28,785 |
| December 31, 2011 | N/A | N/A | N/A | ($69,725) | ($5,149) |
| **Total** | | | | **($140,318)** | **($13,685)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,582,886 |
| b. Normal cost at December 31, 2010 | 8,810 |
| c. Benefit payments during 2011 | (25,413) |
| d. Interest at 8.0% to December 31, 2011 | 126,319 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,692,602 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,692,602 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,660,388 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 32,214 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,755,810 |
| b. Contributions for 2011[1] | 14,849 |
| c. Benefit payments and expenses during 2011 | (25,580) |
| d. Interest at 8.0% to December 31, 2011 | 140,036 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,885,114 |
| 5. Actuarial value of assets at December 31, 2011 | 1,800,706 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (84,409) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($52,195)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($172,924)** |
| 2. Expected increase | (19,589) |
| 3. Liability (gain)/loss | (32,214) |
| 4. Asset (gain)/loss | 84,409 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($140,318)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 12,749 | 196,710 | 6.48% | 125 | 98,262 | 0.13% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 5,481 | 90,299 | 6.07% | 8,685 | 146,230 | 5.94% |
| **Total** | **$18,230** | **$287,009** | **6.35%** | **$8,810** | **$244,492** | **3.60%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($140,318) | ($172,924) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (13,685) | (15,584) |
| 3. Combined valuation payroll | 561,258 | 488,423 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (2.44%) | (3.19%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 6.35% | 3.60% |
| b. Tier 1/Tier 2 UAL rate | (2.44%) | (3.19%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 4.04% | 0.53% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 108% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | 4.04% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (2.44%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.44%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 4.04% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 1.37% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 6.35% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 7.72% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.72% | 6.53% |
| b. Tier 1/Tier 2 UAL rate | (2.44%) | (1.31%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate | 5.41% | 5.34% |
| *(a. + b. + c., minimum of 5.41%)* | | |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $196,710 | $0 | $196,710 |
| Tier 2 | 90,299 | 0 | 90,299 |
| Tier 1/Tier 2 valuation payroll | 287,009 | 0 | 287,009 |
| OPSRP valuation payroll | 238,526 | 35,723 | 274,249 |
| **Combined valuation payroll** | **$525,535** | **$35,723** | **$561,258** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 3 | 2 | 6 | 11 | 2 | 3 | 6 | 11 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 2 | 6 | 11 | 2 | 3 | 6 | 11 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 6 | 4 | N/A | 10 | 6 | 4 | N/A | 10 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 6 | 4 | N/A | 10 | 6 | 4 | N/A | 10 |
| **Dormant Members** | | | | | | | | |
| General Service | 3 | 1 | 0 | 4 | 5 | 1 | 0 | 6 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 1 | 0 | 4 | 5 | 1 | 0 | 6 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 2 |
| **Grand Total Number of Members** | **15** | **7** | **6** | **28** | **15** | **8** | **6** | **29** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | 1 | | | | | | | | **1** |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | | | | 1 | | | | | **1** |
| **45-49** | | | | | 1 | | | | | **1** |
| **50-54** | | | | | 1 | | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **2** | | | **3** | | | | | **5** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 2 | 2,182 |
| **45-49** | | |
| **50-54** | 2 | 263 |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 4 | 1,222 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 173 |
| **60-64** | 1 | 87 |
| **65-69** | 1 | 1,725 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 3 | 662 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation.  A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Tillamook County Soil And Water Conservation District/2821
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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September 28, 2012
Tillamook County Soil And Water Conservation District/2821

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Tillamook County Soil And Water Conservation District/2821

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Tillamook County Soil And Water Conservation District -- #2821

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Tillamook County Soil And Water Conservation District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tillamook County Soil And Water Conservation District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Tillamook County Soil And Water Conservation District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.66% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 5.53% | 5.53% | 5.53% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.34%** | **11.95%** | **14.68%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **16.93%** | **12.44%** | **15.17%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 87%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.19% | 16.19% |
| Minimum July 1, 2015 Rate | 12.95% | 9.71% |
| Maximum July 1, 2015 Rate | 19.43% | 22.67% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 16 | 19 |
| Amortization factor | 11.705 | 13.025 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.28% | 4.95% | 4.95% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.19% | 5.53% | 5.53% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $114,372 | $163,546 | $49,174 | 70% | $48,254 | 102% |
| 12/31/2007 | 131,762 | 172,308 | 40,546 | 76% | 68,926 | 59% |
| 12/31/2008 | 117,920 | 186,756 | 68,836 | 63% | 73,289 | 94% |
| 12/31/2009 | 160,075 | 207,194 | 47,119 | 77% | 74,841 | 63% |
| 12/31/2010 | 224,527 | 251,501 | 26,974 | 89% | 62,899 | 43% |
| 12/31/2011 | 238,346 | 275,346 | 37,000 | 87% | 58,527 | 63% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Tillamook County Soil And Water Conservation District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $37,000 | $26,974 |
| Allocated pooled OPSRP UAL | 999 | 781 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 37,999 | 27,755 |
| Combined valuation payroll | 58,527 | 62,899 |
| Net pension UAL as a percentage of payroll | 65% | 44% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,516 | $2,263 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $6,238 | $6,100 |
| Tier 1/Tier 2 valuation payroll | 58,527 | 62,899 |
| Tier 1/Tier 2 pension normal cost rate | 10.66% | 9.70% |
| Tier 1/ Tier 2 Actuarial accrued liability | $275,346 | $251,501 |
| Actuarial asset value | 238,346 | 224,527 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 37,000 | 26,974 |
| Tier 1/ Tier 2 Funded status | 87% | 89% |
| Combined valuation payroll | $58,527 | $62,899 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 63% | 43% |
| Tier 1/Tier 2 UAL rate | 5.53% | 3.72% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 3 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 58,527 | 62,899 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate** ***(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $59,319 | $59,010 |
| 2. Employer reserves | 179,027 | 165,517 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$238,346** | **$224,527** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $224,527 |
| 2. | Regular employer contributions | 9,619 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | 595 |
| 5. | Interest credited | 3,605 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$238,346** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 6,238 | 6,100 |
| **Total** | **$6,238** | **$6,100** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $6,238 | $6,238 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 27,974 | 27,824 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 169,446 | 155,104 |
| ▪ **Total Active Members** | **$197,420** | **$182,928** |
| Dormant Members | 77,926 | 68,573 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$275,346** | **$251,501** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $275,346 | $275,346 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $275,346 | $251,501 |
| 2. Actuarial value of assets | 238,346 | 224,527 |
| 3. Unfunded accrued liability *(1. – 2.)* | 37,000 | 26,974 |
| 4. Funded percentage *(2. ÷ 1.)* | 87% | 89% |
| 5. Combined valuation payroll | $58,527 | $62,899 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 63% | 43% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $25,692 | $2,118 | $1,965 | $25,539 | $2,197 |
| December 31, 2009 | $21,425 | $1,636 | $1,644 | $21,433 | $1,697 |
| December 31, 2011 | N/A | N/A | N/A | ($9,972) | ($736) |
| **Total** | | | | **$37,000** | **$3,158** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $251,501 |
| b. Normal cost at December 31, 2010 | 6,100 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 20,608 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 278,209 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 278,209 |
| 2. Actuarial accrued liability at December 31, 2011 | 275,346 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 2,863 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 224,527 |
| b. Contributions for 2011[1] | 9,619 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 18,347 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 252,493 |
| 5. Actuarial value of assets at December 31, 2011 | 238,346 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (14,147) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($11,284)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$26,974** |
| 2. Expected increase | (1,258) |
| 3. Liability (gain)/loss | (2,863) |
| 4. Asset (gain)/loss | 14,147 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$37,000** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 6,238 | 58,527 | 10.66% | 6,100 | 62,899 | 9.70% |
| **Total** | **$6,238** | **$58,527** | **10.66%** | **$6,100** | **$62,899** | **9.70%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $37,000 | $26,974 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 3,158 | 2,266 |
| 3. Combined valuation payroll | 58,527 | 62,899 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 5.40% | 3.60% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.66% | 9.70% |
| b. Tier 1/Tier 2 UAL rate | 5.40% | 3.60% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.19% | 13.42% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 16.28% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 16.28% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.26% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.26% |
| c. Funded percentage | 87% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.26% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 13.02% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.54% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.19% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 5.40% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 5.40% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.19% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.66% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.66% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.19% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.66% | 9.70% |
| b. Tier 1/Tier 2 UAL rate | 5.40% | 3.60% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.19% | 13.42% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 58,527 | 0 | 58,527 |
| Tier 1/Tier 2 valuation payroll | 58,527 | 0 | 58,527 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$58,527** | **$0** | **$58,527** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 1 | N/A | 2 | 1 | 1 | N/A | 2 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 3 | 0 | 3 | 0 | 3 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 3 | 0 | 3 | 0 | 3 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **1** | **6** | **0** | **7** | **1** | **6** | **0** | **7** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | 1 | | | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | 1 | | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | | **2** | | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | 11 |
| 45-49 | 1 | 506 |
| 50-54 | | |
| 55-59 | 1 | 400 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 3 | 306 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Tillamook Fire District/2783
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
Tillamook Fire District/2783

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Tillamook Fire District/2783

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On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

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Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Tillamook Fire District -- #2783

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Tillamook Fire District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tillamook Fire District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Tillamook Fire District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 15.38% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (2.54%) | (2.54%) | (2.54%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **12.99%** | **3.88%** | **6.61%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.58%** | **4.37%** | **7.10%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 104%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.84% | 12.84% |
| Minimum July 1, 2015 Rate | 9.84% | 6.84% |
| Maximum July 1, 2015 Rate | 15.84% | 18.84% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 4 | 3 |
| Amortization factor | 3.272 | 2.978 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 9.84% | (5.73%) | (5.73%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.84% | (2.54%) | (2.54%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $699,746 | $499,204 | ($200,541) | 140% | $209,696 | (96%) |
| 12/31/2007 | 782,193 | 561,996 | (220,197) | 139% | 217,679 | (101%) |
| 12/31/2008 | 596,084 | 642,641 | 46,557 | 93% | 235,076 | 20% |
| 12/31/2009 | 668,508 | 632,050 | (36,458) | 106% | 196,215 | (19%) |
| 12/31/2010 | 737,343 | 675,041 | (62,302) | 109% | 208,067 | (30%) |
| 12/31/2011 | 755,393 | 729,306 | (26,087) | 104% | 265,563 | (10%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Tillamook Fire District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($26,087) | ($62,302) |
| Allocated pooled OPSRP UAL | 4,531 | 2,583 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (21,556) | (59,719) |
| Combined valuation payroll | 265,563 | 208,067 |
| Net pension UAL as a percentage of payroll | (8%) | (29%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $6,880 | $7,486 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $32,276 | $32,335 |
| Tier 1/Tier 2 valuation payroll | 209,811 | 208,067 |
| Tier 1/Tier 2 pension normal cost rate | 15.38% | 15.54% |
| Tier 1/ Tier 2 Actuarial accrued liability | $729,306 | $675,041 |
| Actuarial asset value | 755,393 | 737,343 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (26,087) | (62,302) |
| Tier 1/ Tier 2 Funded status | 104% | 109% |
| Combined valuation payroll | $265,563 | $208,067 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (10%) | (30%) |
| Tier 1/Tier 2 UAL rate | (2.54%) | (2.85%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 0 | 1 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 265,563 | 208,067 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $63,553 | $59,672 |
| 2. Employer reserves | 521,923 | 508,896 |
| 3. Benefits in force reserve | 169,916 | 168,774 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$755,393** | **$737,343** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $737,343 |
| 2. | Regular employer contributions | 14,118 |
| 3. | Benefit payments and expenses | (28,468) |
| 4. | Adjustments[2] | 12,400 |
| 5. | Interest credited | 20,001 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$755,393** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $14,662 | $15,309 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 17,614 | 17,026 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$32,276** | **$32,335** |

### ***Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes***

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $32,276 | $32,276 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $275,451 | $247,081 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 144,821 | 121,502 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$420,272** | **$368,583** |
| Dormant Members | 0 | 28,562 |
| Retired Members and Beneficiaries | 309,034 | 277,896 |
| **Total Actuarial Accrued Liability** | **$729,306** | **$675,041** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $729,306 | $729,306 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $729,306 | $675,041 |
| 2. Actuarial value of assets | 755,393 | 737,343 |
| 3. Unfunded accrued liability *(1. – 2.)* | (26,087) | (62,302) |
| 4. Funded percentage *(2. ÷ 1.)* | 104% | 109% |
| 5. Combined valuation payroll | $265,563 | $208,067 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (10%) | (30%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($246,090) | ($20,281) | ($18,824) | ($244,633) | ($21,042) |
| December 31, 2009 | $210,906 | $16,111 | $16,187 | $210,982 | $16,715 |
| December 31, 2011 | N/A | N/A | N/A | $7,564 | $559 |
| **Total** | | | | **($26,087)** | **($3,768)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $675,041 |
| b. Normal cost at December 31, 2010 | 32,335 |
| c. Benefit payments during 2011 | (28,282) |
| d. Interest at 8.0% to December 31, 2011 | 55,459 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 734,553 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 734,553 |
| 2. Actuarial accrued liability at December 31, 2011 | 729,306 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 5,247 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 737,343 |
| b. Contributions for 2011[1] | 14,118 |
| c. Benefit payments and expenses during 2011 | (28,468) |
| d. Interest at 8.0% to December 31, 2011 | 58,413 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 781,405 |
| 5. Actuarial value of assets at December 31, 2011 | 755,393 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (26,013) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($20,766)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($62,302)** |
| 2. Expected increase | 15,449 |
| 3. Liability (gain)/loss | (5,247) |
| 4. Asset (gain)/loss | 26,013 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($26,087)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $14,662 | $82,172 | 17.84% | $15,309 | $81,022 | 18.89% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 17,614 | 127,639 | 13.80% | 17,026 | 127,045 | 13.40% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$32,276** | **$209,811** | **15.38%** | **$32,335** | **$208,067** | **15.54%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($26,087) | ($62,302) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (3,768) | (6,173) |
| 3. Combined valuation payroll | 265,563 | 208,067 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.42%) | (2.97%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 15.38% | 15.54% |
| b. Tier 1/Tier 2 UAL rate | (1.42%) | (2.97%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.09% | 12.69% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 9.84% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 9.84% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.97% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 104% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 6.84% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 12.84% |
| 7. July 1, 2013 total pension rate, before adjustment | 14.09% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.25%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.42%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (2.67%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.84% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 15.38% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 15.38% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.84% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 15.38% | 15.54% |
| b. Tier 1/Tier 2 UAL rate | (2.67%) | (2.97%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 12.84% | 12.69% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $82,172 | $82,172 |
| Tier 2 | 0 | 127,639 | 127,639 |
| Tier 1/Tier 2 valuation payroll | 0 | 209,811 | 209,811 |
| OPSRP valuation payroll | 0 | 55,752 | 55,752 |
| **Combined valuation payroll** | **$0** | **$265,563** | **$265,563** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 2 | 1 | 4 | 1 | 2 | 0 | 3 |
| Total | 1 | 2 | 1 | 4 | 1 | 2 | 0 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 3 | 1 | 0 | 4 | 3 | 0 | 0 | 3 |
| Total | 4 | 1 | 0 | 5 | 4 | 0 | 0 | 4 |
| **Grand Total Number of Members** | **5** | **3** | **1** | **9** | **6** | **2** | **0** | **8** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | 1 | | | | | | | **1** |
| **40-44** | | 1 | | | | | | | | **1** |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | 1 | | | | | | **1** |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **1** | **1** | | | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | | |
| **60-64** | 2 | 590 |
| **65-69** | 3 | 292 |
| **70-74** | | |
| **75-79** | | |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 5 | 411 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Town of Butte Falls/2253
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
Town of Butte Falls/2253

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Town of Butte Falls/2253

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Town of Butte Falls -- #2253

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Town of Butte Falls to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Town of Butte Falls.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Town of Butte Falls*

| | **Payroll** | | |
|---|---|---|---|
| | | **OPSRP** | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 5.62% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.21%) | (0.21%) | (0.21%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **6.21%** | **8.94%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **6.70%** | **9.43%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 99%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 12 | 30 |
| Amortization factor | 9.493 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 0.61% | (0.77%) | (0.77%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 5.41% | (0.21%) | (0.21%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $200,608 | $134,232 | ($66,376) | 149% | $74,341 | (89%) |
| 12/31/2007 | 218,103 | 156,847 | (61,256) | 139% | 58,845 | (104%) |
| 12/31/2008 | 161,386 | 168,410 | 7,024 | 96% | 78,132 | 9% |
| 12/31/2009 | 183,862 | 167,980 | (15,882) | 109% | 107,885 | (15%) |
| 12/31/2010 | 197,488 | 178,619 | (18,869) | 111% | 112,140 | (17%) |
| 12/31/2011 | 198,605 | 200,004 | 1,399 | 99% | 86,198 | 2% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Town of Butte Falls*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $1,399 | ($18,869) |
| Allocated pooled OPSRP UAL | 1,471 | 1,392 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,870 | (17,477) |
| Combined valuation payroll | 86,198 | 112,140 |
| Net pension UAL as a percentage of payroll | 3% | (16%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,233 | $4,035 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $407 | $344 |
| Tier 1/Tier 2 valuation payroll | 15,521 | 19,682 |
| Tier 1/Tier 2 pension normal cost rate | 5.62% | 4.68% |
| Tier 1/ Tier 2 Actuarial accrued liability | $200,004 | $178,619 |
| Actuarial asset value | 198,605 | 197,488 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 1,399 | (18,869) |
| Tier 1/ Tier 2 Funded status | 99% | 111% |
| Combined valuation payroll | $86,198 | $112,140 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 2% | (17%) |
| Tier 1/Tier 2 UAL rate | (0.21%) | 0.66% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 3 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 2 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 86,198 | 112,140 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $41,755 | $43,784 |
| 2. Employer reserves | 137,985 | 140,139 |
| 3. Benefits in force reserve | 18,864 | 13,565 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$198,605** | **$197,488** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $197,488 |
| 2. Regular employer contributions | (161) |
| 3. Benefit payments and expenses | (3,161) |
| 4. Adjustments[2] | (1,537) |
| 5. Interest credited | 5,975 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$198,605** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $68 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 339 | 344 |
| **Total** | **$407** | **$344** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $407 | $407 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $31,962 | $33,770 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 60,243 | 54,172 |
| ▪ Tier 2 General Service | 1,802 | 1,574 |
| ▪ **Total Active Members** | **$94,007** | **$89,516** |
| Dormant Members | 71,687 | 66,767 |
| Retired Members and Beneficiaries | 34,310 | 22,336 |
| **Total Actuarial Accrued Liability** | **$200,004** | **$178,619** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $200,004 | $200,004 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $200,004 | $178,619 |
| 2. Actuarial value of assets | 198,605 | 197,488 |
| 3. Unfunded accrued liability *(1. – 2.)* | 1,399 | (18,869) |
| 4. Funded percentage *(2. ÷ 1.)* | 99% | 111% |
| 5. Combined valuation payroll | $86,198 | $112,140 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 2% | (17%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($67,264) | ($5,543) | ($5,145) | ($66,866) | ($5,751) |
| December 31, 2009 | $51,713 | $3,950 | $3,969 | $51,732 | $4,098 |
| December 31, 2011 | N/A | N/A | N/A | $16,533 | $1,221 |
| **Total** | | | | **$1,399** | **($432)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $178,619 |
| b. Normal cost at December 31, 2010 | 344 |
| c. Benefit payments during 2011 | (3,140) |
| d. Interest at 8.0% to December 31, 2011 | 14,191 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 190,014 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 190,014 |
| 2. Actuarial accrued liability at December 31, 2011 | 200,004 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (9,990) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 197,488 |
| b. Contributions for 2011[1] | (161) |
| c. Benefit payments and expenses during 2011 | (3,161) |
| d. Interest at 8.0% to December 31, 2011 | 15,666 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 209,832 |
| 5. Actuarial value of assets at December 31, 2011 | 198,605 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (11,228) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($21,218)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($18,869)** |
| 2. Expected increase | (950) |
| 3. Liability (gain)/loss | 9,990 |
| 4. Asset (gain)/loss | 11,228 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$1,399** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $68 | $12,638 | 0.54% | $0 | $16,683 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 339 | 2,883 | 11.76% | 344 | 2,999 | 11.47% |
| **Total** | **$407** | **$15,521** | **2.62%** | **$344** | **$19,682** | **1.75%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $1,399 | ($18,869) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (432) | (1,838) |
| 3. Combined valuation payroll | 86,198 | 112,140 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (0.50%) | (1.64%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 2.62% | 1.75% |
| b. Tier 1/Tier 2 UAL rate | (0.50%) | (1.64%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 2.25% | 0.23% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 99% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | 2.25% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.16% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (0.50%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.34%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 2.41% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 3.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 2.62% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 5.62% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.62% | 4.68% |
| b. Tier 1/Tier 2 UAL rate | (0.34%) | 0.54% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $12,638 | $12,638 |
| Tier 2 | 2,883 | 0 | 2,883 |
| Tier 1/Tier 2 valuation payroll | 2,883 | 12,638 | 15,521 |
| OPSRP valuation payroll | 31,482 | 39,195 | 70,677 |
| **Combined valuation payroll** | **$34,365** | **$51,833** | **$86,198** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 |
| Police & Fire | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 2 |
| Total | 1 | 0 | 2 | 3 | 1 | 0 | 3 | 4 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Police & Fire | 1 | 2 | N/A | 3 | 2 | 2 | N/A | 4 |
| Total | 1 | 3 | N/A | 4 | 2 | 3 | N/A | 5 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 1 | 2 | 0 | 3 | 1 | 0 | 0 | 1 |
| Total | 1 | 2 | 1 | 4 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 2 |
| Total | 2 | 1 | 0 | 3 | 1 | 1 | 0 | 2 |
| **Grand Total Number of Members** | **5** | **6** | **3** | **14** | **5** | **5** | **3** | **13** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | 1 | | | | | | 1 |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | 1 | | | | | | 1 |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | 1 | 62 |
| 45-49 | 1 | |
| 50-54 | | |
| 55-59 | 1 | 415 |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 3 | 159 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | 1 | 87 |
| 60-64 | | |
| 65-69 | 1 | 84 |
| 70-74 | | |
| 75-79 | | |
| 80-84 | 1 | 109 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 3 | 93 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Tri-County Cooperative Weed Management Area/2865
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Tri-County Cooperative Weed Management Area/2865

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Tri-County Cooperative Weed Management Area -- #2865

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Tri-County Cooperative Weed Management Area to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Tri-County Cooperative Weed Management Area.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Tri-County Cooperative Weed Management Area*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.82% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.15% | 0.15% | 0.15% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.12%** | **6.57%** | **9.30%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **11.71%** | **7.06%** | **9.79%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 100%.

| **Funded Status as of December 31, 2013** | **80% to 120%** | **Under 70% or Over 130%** |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 10.97% | 10.97% |
| Minimum July 1, 2015 Rate | 7.97% | 4.97% |
| Maximum July 1, 2015 Rate | 13.97% | 16.97% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 16 | 19 |
| Amortization factor | 11.673 | 13.201 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.27% | 0.13% | 0.13% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 10.97% | 0.15% | 0.15% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $0 | $0 | $0 | 0% | $0 | 0% |
| 12/31/2007 | 0 | 0 | 0 | 0% | 49,323 | 0% |
| 12/31/2008 | (99) | 0 | 99 | 0% | 76,517 | 0% |
| 12/31/2009 | (155) | 0 | 155 | 0% | 76,926 | 0% |
| 12/31/2010 | (252) | 0 | 252 | 0% | 113,522 | 0% |
| 12/31/2011 | (275) | 0 | 275 | 100% | 114,758 | 0% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Tri-County Cooperative Weed Management Area*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $275 | $252 |
| Allocated pooled OPSRP UAL | 1,958 | 1,410 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 2,233 | 1,662 |
| Combined valuation payroll | 114,758 | 113,522 |
| Net pension UAL as a percentage of payroll | 2% | 1% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,973 | $4,084 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $0 | $0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| Tier 1/ Tier 2 Actuarial accrued liability | $0 | $0 |
| Actuarial asset value | (275) | (252) |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 275 | 252 |
| Tier 1/ Tier 2 Funded status | 0% | 0% |
| Combined valuation payroll | $114,758 | $113,522 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 0% | 0% |
| Tier 1/Tier 2 UAL rate | 0.15% | 0.14% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 114,758 | 113,522 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $0 | $0 |
| 2. Employer reserves | (275) | (252) |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **($275)** | **($252)** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | ($252) |
| 2. Regular employer contributions | 100 |
| 3. Benefit payments and expenses | 0 |
| 4. Adjustments[2] | (122) |
| 5. Interest credited | (1) |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **($275)** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$0** | **$0** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$0** | **$0** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $0 | $0 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $0 | $0 |
| 2. Actuarial value of assets | (275) | (252) |
| 3. Unfunded accrued liability *(1. – 2.)* | 275 | 252 |
| 4. Funded percentage *(2. ÷ 1.)* | 100% | 0% |
| 5. Combined valuation payroll | $114,758 | $113,522 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 0% | 0% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $0 | $0 | $0 | $0 | $0 |
| December 31, 2009 | $156 | $11 | $12 | $157 | $11 |
| December 31, 2011 | N/A | N/A | N/A | $118 | $9 |
| **Total** | | | | **$275** | **$20** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $0 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 0 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 0 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 0 |
| 2. Actuarial accrued liability at December 31, 2011 | 0 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 0 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | (252) |
| b. Contributions for 2011[1] | 100 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | (16) |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | (168) |
| 5. Actuarial value of assets at December 31, 2011 | (275) |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (107) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($107)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$252** |
| 2. Expected increase | (84) |
| 3. Liability (gain)/loss | 0 |
| 4. Asset (gain)/loss | 107 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$275** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$0** | **$0** | **10.82%** | **$0** | **$0** | **10.30%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $275 | $252 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 20 | 18 |
| 3. Combined valuation payroll | 114,758 | 113,522 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.02% | 0.02% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | 0.02% | 0.02% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 10.97% | 10.44% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 10.27% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 10.27% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 2.05% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 100% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 7.27% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 13.27% |
| 7. | July 1, 2013 total pension rate, before adjustment | 10.97% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.02% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.02% |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 10.97% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.82% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.82% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 10.97% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.82% | 10.30% |
| b. Tier 1/Tier 2 UAL rate | 0.02% | 0.02% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 10.97% | 10.44% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 0 | 0 | 0 |
| OPSRP valuation payroll | 114,758 | 0 | 114,758 |
| **Combined valuation payroll** | **$114,758** | **$0** | **$114,758** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 3 | 3 | 0 | 0 | 3 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 3 | 3 | 0 | 0 | 3 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **0** | **3** | **3** | **0** | **0** | **3** | **3** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Umatilla-Morrow Radio and Data District/2874
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Umatilla-Morrow Radio and Data District/2874

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Umatilla-Morrow Radio and Data District/2874

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Umatilla-Morrow Radio and Data District -- #2874

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Umatilla-Morrow Radio and Data District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Umatilla-Morrow Radio and Data District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Umatilla-Morrow Radio and Data District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 7.09% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.19% | 0.19% | 0.19% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **7.43%** | **6.61%** | **9.34%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **8.02%** | **7.10%** | **9.83%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 0%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 7.28% | 7.28% |
| Minimum July 1, 2015 Rate | 4.28% | 1.28% |
| Maximum July 1, 2015 Rate | 10.28% | 13.28% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 17 | N/A |
| Amortization factor | 11.993 | N/A |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | N/A | N/A | N/A |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 7.28% | 0.19% | 0.19% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $0 | $0 | $0 | 0% | $0 | 0% |
| 12/31/2007 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2008 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2009 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2010 | 0 | 0 | 0 | 0% | 0 | 0% |
| 12/31/2011 | 0 | 493 | 493 | 0% | 64,245 | 1% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Umatilla-Morrow Radio and Data District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $493 | $0 |
| Allocated pooled OPSRP UAL | 1,096 | 0 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,589 | 0 |
| Combined valuation payroll | 64,245 | 0 |
| Net pension UAL as a percentage of payroll | 2% | 0% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,664 | $0 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $4,554 | $0 |
| Tier 1/Tier 2 valuation payroll | 64,245 | 0 |
| Tier 1/Tier 2 pension normal cost rate | 7.09% | 0.00% |
| Tier 1/ Tier 2 Actuarial accrued liability | $493 | $0 |
| Actuarial asset value | 0 | 0 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 493 | 0 |
| Tier 1/ Tier 2 Funded status | 0% | 0% |
| Combined valuation payroll | $64,245 | $0 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 1% | 0% |
| Tier 1/Tier 2 UAL rate | 0.19% | 0.00% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 0 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 64,245 | 0 |
| 3. Amortization factor | 11.626 | 0.000 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $0 | $0 |
| 2. Employer reserves | 0 | 0 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$0** | **$0** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $0 |
| 2. Regular employer contributions | 0 |
| 3. Benefit payments and expenses | 0 |
| 4. Adjustments [2] | 0 |
| 5. Interest credited | 0 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$0** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 4,554 | 0 |
| **Total** | **$4,554** | **$0** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $4,554 | $4,554 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 493 | 0 |
| ▪ **Total Active Members** | **$493** | **$0** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$493** | **$0** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $493 | $493 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $493 | $0 |
| 2. Actuarial value of assets | 0 | 0 |
| 3. Unfunded accrued liability *(1. – 2.)* | 493 | 0 |
| 4. Funded percentage *(2. ÷ 1.)* | 0% | 0% |
| 5. Combined valuation payroll | $64,245 | $0 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 1% | 0% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $0 | $0 | $0 | $0 | $0 |
| December 31, 2009 | $0 | $0 | $0 | $0 | $0 |
| December 31, 2011 | N/A | N/A | N/A | $493 | $36 |
| **Total** | | | | **$493** | **$36** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $0 |
| b. Normal cost at December 31, 2010 | 0 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 0 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 0 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 0 |
| 2. Actuarial accrued liability at December 31, 2011 | 493 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (493) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 0 |
| b. Contributions for 2011[1] | 0 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 0 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 0 |
| 5. Actuarial value of assets at December 31, 2011 | 0 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | 0 |
| **7. Total actuarial gain/(loss) *(3. + 6.)*** | **($493)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$0** |
| 2. Expected increase | 0 |
| 3. Liability (gain)/loss | 493 |
| 4. Asset (gain)/loss | 0 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011 *(1. + 2. + 3. + 4. + 5.)*** | **$493** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 4,554 | 64,245 | 7.09% | 0 | 0 | 0.00% |
| **Total** | **$4,554** | **$64,245** | **7.09%** | **$0** | **$0** | **0.00%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $493 | $0 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 36 | 0 |
| 3. Combined valuation payroll | 64,245 | 0 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.06% | 0.00% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.09% | N/A |
| b. Tier 1/Tier 2 UAL rate | 0.06% | N/A |
| c. Multnomah Fire District #10 rate | 0.13% | N/A |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 7.28% | N/A |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 7.28% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 7.28% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | N/A |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | N/A |
| | c. Funded percentage | N/A |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | N/A |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | N/A |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | N/A |
| 7. | July 1, 2013 total pension rate, before adjustment | N/A |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | N/A |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | N/A |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | N/A |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | N/A |
| 12. | Tier 1/Tier 2 retiree healthcare rate | N/A |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | N/A |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | N/A |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | N/A |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | N/A |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 7.09% | N/A |
| b. Tier 1/Tier 2 UAL rate | 0.06% | N/A |
| c. Multnomah Fire District #10 rate | 0.13% | N/A |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 7.28% | N/A |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 64,245 | 0 | 64,245 |
| Tier 1/Tier 2 valuation payroll | 64,245 | 0 | 64,245 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$64,245** | **$0** | **$64,245** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **1** | **0** | **1** | **0** | **0** | **0** | **0** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | 1 | | | | | | | | **1** |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Valley View Cemetery/2536
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System (“PERS” or “the System”) as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Valley View Cemetery/2536

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Valley View Cemetery -- #2536

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Valley View Cemetery to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Valley View Cemetery.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Valley View Cemetery*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 5.46% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.05%) | (0.05%) | (0.05%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **6.37%** | **9.10%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **6.86%** | **9.59%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 942%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (25.15%) | (25.35%) | (25.35%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (11.56%) | (11.61%) | (11.61%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $108,016 | $28,696 | ($79,320) | 376% | $0 | 0% |
| 12/31/2007 | 116,095 | 28,157 | (87,938) | 412% | 11,898 | (739%) |
| 12/31/2008 | 77,029 | 26,660 | (50,369) | 289% | 8,667 | (581%) |
| 12/31/2009 | 77,911 | 8,018 | (69,893) | 972% | 16,000 | (437%) |
| 12/31/2010 | 87,303 | 8,851 | (78,452) | 986% | 18,935 | (414%) |
| 12/31/2011 | 88,943 | 9,444 | (79,499) | 942% | 39,559 | (201%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Valley View Cemetery*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($79,499) | ($78,452) |
| Allocated pooled OPSRP UAL | 675 | 235 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (78,824) | (78,217) |
| Combined valuation payroll | 39,559 | 18,935 |
| Net pension UAL as a percentage of payroll | (199%) | (413%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $1,025 | $681 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $2 | $3 |
| Tier 1/Tier 2 valuation payroll | 4,368 | 3,433 |
| Tier 1/Tier 2 pension normal cost rate | 5.46% | 5.43% |
| Tier 1/ Tier 2 Actuarial accrued liability | $9,444 | $8,851 |
| Actuarial asset value | 88,943 | 87,303 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (79,499) | (78,452) |
| Tier 1/ Tier 2 Funded status | 942% | 986% |
| Combined valuation payroll | $39,559 | $18,935 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (201%) | (414%) |
| Tier 1/Tier 2 UAL rate | (0.05%) | (0.09%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 0 |
| Tier 1/Tier 2 dormant members | 1 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 39,559 | 18,935 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $0 | $0 |
| 2. Employer reserves | 84,881 | 82,855 |
| 3. Benefits in force reserve | 4,062 | 4,448 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$88,943** | **$87,303** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $87,303 |
| 2. | Regular employer contributions | 200 |
| 3. | Benefit payments and expenses | (681) |
| 4. | Adjustments[2] | 203 |
| 5. | Interest credited | 1,918 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$88,943** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 2 | 3 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$2** | **$3** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $2 | $2 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 2,056 | 1,527 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$2,056** | **$1,527** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 7,388 | 7,324 |
| **Total Actuarial Accrued Liability** | **$9,444** | **$8,851** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $9,444 | $9,444 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $9,444 | $8,851 |
| 2. Actuarial value of assets | 88,943 | 87,303 |
| 3. Unfunded accrued liability *(1. – 2.)* | (79,499) | (78,452) |
| 4. Funded percentage *(2. ÷ 1.)* | 942% | 986% |
| 5. Combined valuation payroll | $39,559 | $18,935 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (201%) | (414%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($92,727) | ($7,642) | ($7,093) | ($92,178) | ($7,929) |
| December 31, 2009 | $23,146 | $1,768 | $1,776 | $23,154 | $1,834 |
| December 31, 2011 | N/A | N/A | N/A | ($10,475) | ($774) |
| **Total** | | | | **($79,499)** | **($6,869)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $8,851 |
| b. Normal cost at December 31, 2010 | 3 |
| c. Benefit payments during 2011 | (676) |
| d. Interest at 8.0% to December 31, 2011 | 681 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 8,859 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 8,859 |
| 2. Actuarial accrued liability at December 31, 2011 | 9,444 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (585) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 87,303 |
| b. Contributions for 2011[1] | 200 |
| c. Benefit payments and expenses during 2011 | (681) |
| d. Interest at 8.0% to December 31, 2011 | 6,965 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 93,787 |
| 5. Actuarial value of assets at December 31, 2011 | 88,943 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (4,844) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($5,429)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($78,452)** |
| 2. Expected increase | (6,476) |
| 3. Liability (gain)/loss | 585 |
| 4. Asset (gain)/loss | 4,844 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($79,499)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 2 | 4,368 | 0.05% | 3 | 3,433 | 0.09% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$2** | **$4,368** | **0.05%** | **$3** | **$3,433** | **0.09%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($79,499) | ($78,452) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (6,869) | (6,529) |
| 3. Combined valuation payroll | 39,559 | 18,935 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (17.36%) | (34.48%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 0.05% | 0.09% |
| b. Tier 1/Tier 2 UAL rate | (17.36%) | (34.48%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | (17.18%) | (34.27%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 942% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 6.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 0.00% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.41% |
| 7. July 1, 2013 total pension rate, before adjustment | (17.18%) |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 17.18% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (17.36%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.18%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 0.00% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 5.41% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 0.05% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 5.46% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.46% | 5.43% |
| b. Tier 1/Tier 2 UAL rate | (0.18%) | (0.21%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $4,368 | $0 | $4,368 |
| Tier 2 | 0 | 0 | 0 |
| Tier 1/Tier 2 valuation payroll | 4,368 | 0 | 4,368 |
| OPSRP valuation payroll | 35,191 | 0 | 35,191 |
| **Combined valuation payroll** | **$39,559** | **$0** | **$39,559** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 3 | 3 | 0 | 0 | 2 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 3 | 3 | 0 | 0 | 2 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **3** | **0** | **3** | **6** | **2** | **0** | **2** | **4** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 1 | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 1 | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | 1 | 50 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 1 | 50 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Vernonia Fire/2797
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

Milliman

September 28, 2012
Vernonia Fire/2797

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Vernonia Fire/2797

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Vernonia Fire -- #2797

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Vernonia Fire to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Vernonia Fire.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Vernonia Fire*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 5.98% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.57%) | (0.57%) | (0.57%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **5.56%** | **5.85%** | **8.58%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **6.15%** | **6.34%** | **9.07%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 105%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 5.41% | 5.41% |
| Minimum July 1, 2015 Rate | 2.41% | 0.00% |
| Maximum July 1, 2015 Rate | 8.41% | 11.41% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | (0.78%) | (4.47%) | (4.47%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 2.52% | (0.46%) | (0.46%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $209,789 | $105,970 | ($103,819) | 198% | $65,930 | (157%) |
| 12/31/2007 | 238,088 | 127,240 | (110,848) | 187% | 69,476 | (160%) |
| 12/31/2008 | 181,217 | 160,109 | (21,108) | 113% | 13,898 | (152%) |
| 12/31/2009 | 216,962 | 163,620 | (53,342) | 133% | 68,210 | (78%) |
| 12/31/2010 | 237,730 | 179,180 | (58,550) | 133% | 63,952 | (92%) |
| 12/31/2011 | 202,377 | 193,402 | (8,975) | 105% | 95,536 | (9%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Vernonia Fire*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($8,975) | ($58,550) |
| Allocated pooled OPSRP UAL | 1,630 | 794 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (7,345) | (57,756) |
| Combined valuation payroll | 95,536 | 63,952 |
| Net pension UAL as a percentage of payroll | (8%) | (90%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,475 | $2,301 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $1,357 | $955 |
| Tier 1/Tier 2 valuation payroll | 45,493 | 14,915 |
| Tier 1/Tier 2 pension normal cost rate | 5.98% | 11.74% |
| Tier 1/ Tier 2 Actuarial accrued liability | $193,402 | $179,180 |
| Actuarial asset value | 202,377 | 237,730 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (8,975) | (58,550) |
| Tier 1/ Tier 2 Funded status | 105% | 133% |
| Combined valuation payroll | $95,536 | $63,952 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (9%) | (92%) |
| Tier 1/Tier 2 UAL rate | (0.57%) | (6.40%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 2 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 1 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 95,536 | 63,952 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $12,646 | $40,336 |
| 2. Employer reserves | 109,049 | 197,394 |
| 3. Benefits in force reserve | 80,682 | 0 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$202,377** | **$237,730** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $237,730 |
| 2. | Regular employer contributions | (2,412) |
| 3. | Benefit payments and expenses | (13,518) |
| 4. | Adjustments [2] | (24,516) |
| 5. | Interest credited | 5,093 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$202,377** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $38 | $7 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 1,319 | 948 |
| **Total** | **$1,357** | **$955** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $1,357 | $1,357 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $4,438 | $829 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 11,791 | 7,991 |
| ▪ **Total Active Members** | **$16,229** | **$8,820** |
| Dormant Members | 30,435 | 170,360 |
| Retired Members and Beneficiaries | 146,738 | 0 |
| **Total Actuarial Accrued Liability** | **$193,402** | **$179,180** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $193,402 | $193,402 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $193,402 | $179,180 |
| 2. Actuarial value of assets | 202,377 | 237,730 |
| 3. Unfunded accrued liability *(1. – 2.)* | (8,975) | (58,550) |
| 4. Funded percentage *(2. ÷ 1.)* | 105% | 133% |
| 5. Combined valuation payroll | $95,536 | $63,952 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (9%) | (92%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($112,931) | ($9,305) | ($8,638) | ($112,264) | ($9,654) |
| December 31, 2009 | $60,062 | $4,588 | $4,610 | $60,084 | $4,760 |
| December 31, 2011 | N/A | N/A | N/A | $43,205 | $3,191 |
| **Total** | | | | **($8,975)** | **($1,703)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $179,180 |
| b. Normal cost at December 31, 2010 | 955 |
| c. Benefit payments during 2011 | (13,429) |
| d. Interest at 8.0% to December 31, 2011 | 13,874 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 180,580 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 180,580 |
| 2. Actuarial accrued liability at December 31, 2011 | 193,402 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (12,822) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 237,730 |
| b. Contributions for 2011[1] | (2,412) |
| c. Benefit payments and expenses during 2011 | (13,518) |
| d. Interest at 8.0% to December 31, 2011 | 18,381 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 240,182 |
| 5. Actuarial value of assets at December 31, 2011 | 202,377 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (37,805) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($50,627)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($58,550)** |
| 2. Expected increase | (1,052) |
| 3. Liability (gain)/loss | 12,822 |
| 4. Asset (gain)/loss | 37,805 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($8,975)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $38 | $28,566 | 0.13% | $7 | $1,496 | 0.47% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 1,319 | 16,927 | 7.79% | 948 | 13,419 | 7.06% |
| **Total** | **$1,357** | **$45,493** | **2.98%** | **$955** | **$14,915** | **6.40%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($8,975) | ($58,550) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (1,703) | (5,137) |
| 3. Combined valuation payroll | 95,536 | 63,952 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (1.78%) | (8.03%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 2.98% | 6.40% |
| b. Tier 1/Tier 2 UAL rate | (1.78%) | (8.03%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 1.33% | (1.51%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 5.41% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 5.41% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.08% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 105% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 2.41% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 8.41% |
| 7. | July 1, 2013 total pension rate, before adjustment | 1.33% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 1.08% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (1.78%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.70%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 2.41% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 3.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 2.98% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 5.98% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 5.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 5.98% | 11.74% |
| b. Tier 1/Tier 2 UAL rate | (0.70%) | (6.52%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 5.41% | 5.34% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $28,566 | $28,566 |
| Tier 2 | 16,927 | 0 | 16,927 |
| Tier 1/Tier 2 valuation payroll | 16,927 | 28,566 | 45,493 |
| OPSRP valuation payroll | 0 | 50,043 | 50,043 |
| **Combined valuation payroll** | **$16,927** | **$78,609** | **$95,536** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Police & Fire | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 1 |
| Total | 1 | 1 | 1 | 3 | 0 | 1 | 1 | 2 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 1 | 0 | N/A | 1 |
| Total | 0 | 0 | N/A | 0 | 1 | 0 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 2 |
| Total | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **2** | **2** | **1** | **5** | **2** | **2** | **1** | **5** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | 1 | | | | | | | | **1** |
| 45-49 | | | | 1 | | | | | | **1** |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **1** | | **1** | | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 1 | 213 |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | 1 | 213 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | 1 | 906 |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 1 | 906 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Wallowa County/2050
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

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In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
Wallowa County/2050

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Wallowa County -- #2050

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Wallowa County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Wallowa County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Wallowa County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 10.55% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 0.93% | 0.93% | 0.93% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.63%** | **7.35%** | **10.08%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.22%** | **7.84%** | **10.57%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 90%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.48% | 11.48% |
| Minimum July 1, 2015 Rate | 8.48% | 5.48% |
| Maximum July 1, 2015 Rate | 14.48% | 17.48% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 8 |
| Amortization factor | 17.175 | 6.429 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 8.48% | (1.47%) | (1.47%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.43% | 2.88% | 2.88% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $1,160,164 | $858,044 | ($302,120) | 135% | $315,811 | (96%) |
| 12/31/2007 | 1,284,259 | 949,805 | (334,454) | 135% | 295,218 | (113%) |
| 12/31/2008 | 956,442 | 1,052,688 | 96,246 | 91% | 301,113 | 32% |
| 12/31/2009 | 1,085,009 | 1,054,205 | (30,804) | 103% | 280,934 | (11%) |
| 12/31/2010 | 1,148,797 | 1,222,151 | 73,354 | 94% | 299,382 | 25% |
| 12/31/2011 | 1,158,734 | 1,294,432 | 135,698 | 90% | 283,239 | 48% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Wallowa County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $135,698 | $73,354 |
| Allocated pooled OPSRP UAL | 4,833 | 3,717 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 140,531 | 77,071 |
| Combined valuation payroll | 283,239 | 299,382 |
| Net pension UAL as a percentage of payroll | 50% | 26% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $7,337 | $10,771 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $20,401 | $19,226 |
| Tier 1/Tier 2 valuation payroll | 193,346 | 188,418 |
| Tier 1/Tier 2 pension normal cost rate | 10.55% | 10.20% |
| Tier 1/ Tier 2 Actuarial accrued liability | $1,294,432 | $1,222,151 |
| Actuarial asset value | 1,158,734 | 1,148,797 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 135,698 | 73,354 |
| Tier 1/ Tier 2 Funded status | 90% | 94% |
| Combined valuation payroll | $283,239 | $299,382 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 48% | 25% |
| Tier 1/Tier 2 UAL rate | 0.93% | 1.09% |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 2 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 8 | 8 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 283,239 | 299,382 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $123,244 | $113,574 |
| 2. Employer reserves | 711,266 | 680,330 |
| 3. Benefits in force reserve | 324,223 | 354,893 |
| **4. Total market value of assets** ***(1. + 2. + 3.)*** | **$1,158,734** | **$1,148,797** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $1,148,797 |
| 2. | Regular employer contributions | 15,558 |
| 3. | Benefit payments and expenses | (54,321) |
| 4. | Adjustments[2] | 19,351 |
| 5. | Interest credited | 29,350 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$1,158,734** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $75 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 20,326 | 19,226 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$20,401** | **$19,226** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $20,401 | $20,401 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $286,835 | $269,668 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 250,121 | 211,515 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$536,956** | **$481,183** |
| Dormant Members | 167,799 | 156,617 |
| Retired Members and Beneficiaries | 589,677 | 584,351 |
| **Total Actuarial Accrued Liability** | **$1,294,432** | **$1,222,151** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $1,294,432 | $1,294,432 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $1,294,432 | $1,222,151 |
| 2. Actuarial value of assets | 1,158,734 | 1,148,797 |
| 3. Unfunded accrued liability *(1. – 2.)* | 135,698 | 73,354 |
| 4. Funded percentage *(2. ÷ 1.)* | 90% | 94% |
| 5. Combined valuation payroll | $283,239 | $299,382 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 48% | 25% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($406,655) | ($33,511) | ($31,106) | ($404,250) | ($34,768) |
| December 31, 2009 | $378,042 | $28,879 | $29,014 | $378,177 | $29,962 |
| December 31, 2011 | N/A | N/A | N/A | $161,771 | $11,947 |
| **Total** | | | | **$135,698** | **$7,141** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $1,222,151 |
| b. Normal cost at December 31, 2010 | 19,226 |
| c. Benefit payments during 2011 | (53,965) |
| d. Interest at 8.0% to December 31, 2011 | 97,152 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 1,284,564 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 1,284,564 |
| 2. Actuarial accrued liability at December 31, 2011 | 1,294,432 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (9,868) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 1,148,797 |
| b. Contributions for 2011[1] | 15,558 |
| c. Benefit payments and expenses during 2011 | (54,321) |
| d. Interest at 8.0% to December 31, 2011 | 90,353 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 1,200,386 |
| 5. Actuarial value of assets at December 31, 2011 | 1,158,734 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (41,653) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($51,521)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$73,354** |
| 2. Expected increase | 10,823 |
| 3. Liability (gain)/loss | 9,868 |
| 4. Asset (gain)/loss | 41,653 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$135,698** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $75 | $57,724 | 0.13% | $0 | $56,890 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 20,326 | 135,622 | 14.99% | 19,226 | 131,528 | 14.62% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$20,401** | **$193,346** | **10.55%** | **$19,226** | **$188,418** | **10.20%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $135,698 | $73,354 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 7,141 | 2,898 |
| 3. Combined valuation payroll | 283,239 | 299,382 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 2.52% | 0.97% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.55% | 10.20% |
| b. Tier 1/Tier 2 UAL rate | 2.52% | 0.97% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 13.20% | 11.29% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.48% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.48% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.70% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 90% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.48% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.48% |
| 7. July 1, 2013 total pension rate, before adjustment | 13.20% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.72%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 2.52% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 0.80% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.48% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 10.55% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 10.55% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.48% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 10.55% | 10.20% |
| b. Tier 1/Tier 2 UAL rate | 0.80% | 0.97% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 11.48% | 11.29% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $57,724 | $57,724 |
| Tier 2 | 0 | 135,622 | 135,622 |
| Tier 1/Tier 2 valuation payroll | 0 | 193,346 | 193,346 |
| OPSRP valuation payroll | 0 | 89,893 | 89,893 |
| **Combined valuation payroll** | **$0** | **$283,239** | **$283,239** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 1 | 2 | 2 | 5 | 1 | 2 | 2 | 5 |
| Total | 1 | 2 | 2 | 5 | 1 | 2 | 2 | 5 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| Total | 0 | 1 | N/A | 1 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Police & Fire | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| Total | 2 | 0 | 0 | 2 | 2 | 0 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 7 | 1 | 0 | 8 | 7 | 1 | 0 | 8 |
| Total | 7 | 1 | 0 | 8 | 7 | 1 | 0 | 8 |
| **Grand Total Number of Members** | **10** | **4** | **2** | **16** | **10** | **4** | **2** | **16** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | 2 | | | | | | | **2** |
| **50-54** | | | | | | 1 | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **2** | | | **1** | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | | |
| **40-44** | 1 | 1,577 |
| **45-49** | 1 | 1,176 |
| **50-54** | | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | | |
| **70-74** | | |
| **75+** | | |
| **Total** | 2 | 1,377 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 999 |
| **60-64** | 1 | 600 |
| **65-69** | 2 | 618 |
| **70-74** | 1 | 449 |
| **75-79** | 2 | 175 |
| **80-84** | 1 | 103 |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 8 | 467 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

West Side Rural Fire Protection District/2796
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
West Side Rural Fire Protection District/2796

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

Milliman

# ACTUARIAL VALUATION REPORT DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### West Side Rural Fire Protection District -- #2796

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for West Side Rural Fire Protection District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to West Side Rural Fire Protection District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for West Side Rural Fire Protection District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 19.79% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (3.75%) | (3.75%) | (3.75%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.19%** | **2.67%** | **5.40%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **16.78%** | **3.16%** | **5.89%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 117%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.04% | 16.04% |
| Minimum July 1, 2015 Rate | 12.83% | 9.62% |
| Maximum July 1, 2015 Rate | 19.25% | 22.46% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

## *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 14 | 15 |
| Amortization factor | 10.332 | 11.218 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.16% | (3.52%) | (3.52%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.04% | (3.75%) | (3.75%) |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $151,307 | $89,122 | ($62,185) | 170% | $65,236 | (95%) |
| 12/31/2007 | 180,762 | 105,160 | (75,602) | 172% | 68,307 | (111%) |
| 12/31/2008 | 139,545 | 124,659 | (14,886) | 112% | 72,702 | (20%) |
| 12/31/2009 | 180,273 | 148,854 | (31,419) | 121% | 76,630 | (41%) |
| 12/31/2010 | 214,440 | 171,459 | (42,981) | 125% | 79,841 | (54%) |
| 12/31/2011 | 231,035 | 197,980 | (33,055) | 117% | 82,111 | (40%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *West Side Rural Fire Protection District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($33,055) | ($42,981) |
| Allocated pooled OPSRP UAL | 1,401 | 991 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | (31,654) | (41,990) |
| Combined valuation payroll | 82,111 | 79,841 |
| Net pension UAL as a percentage of payroll | (39%) | (53%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $2,127 | $2,873 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $16,252 | $15,385 |
| Tier 1/Tier 2 valuation payroll | 82,111 | 79,841 |
| Tier 1/Tier 2 pension normal cost rate | 19.79% | 19.27% |
| Tier 1/ Tier 2 Actuarial accrued liability | $197,980 | $171,459 |
| Actuarial asset value | 231,035 | 214,440 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (33,055) | (42,981) |
| Tier 1/ Tier 2 Funded status | 117% | 125% |
| Combined valuation payroll | $82,111 | $79,841 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (40%) | (54%) |
| Tier 1/Tier 2 UAL rate | (3.75%) | (4.61%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 1 | 1 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 0 | 0 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 82,111 | 79,841 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $20,359 | $19,679 |
| 2. Employer reserves | 210,676 | 194,761 |
| 3. Benefits in force reserve | 0 | 0 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$231,035** | **$214,440** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $214,440 |
| 2. | Regular employer contributions | 11,350 |
| 3. | Benefit payments and expenses | 0 |
| 4. | Adjustments[2] | 257 |
| 5. | Interest credited | 4,987 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$231,035** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 16,252 | 15,385 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$16,252** | **$15,385** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $16,252 | $16,252 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 197,980 | 171,459 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$197,980** | **$171,459** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 0 | 0 |
| **Total Actuarial Accrued Liability** | **$197,980** | **$171,459** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $197,980 | $197,980 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $197,980 | $171,459 |
| 2. Actuarial value of assets | 231,035 | 214,440 |
| 3. Unfunded accrued liability *(1. – 2.)* | (33,055) | (42,981) |
| 4. Funded percentage *(2. ÷ 1.)* | 117% | 125% |
| 5. Combined valuation payroll | $82,111 | $79,841 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (40%) | (54%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($86,663) | ($7,142) | ($6,629) | ($86,150) | ($7,410) |
| December 31, 2009 | $55,637 | $4,250 | $4,270 | $55,657 | $4,409 |
| December 31, 2011 | N/A | N/A | N/A | ($2,562) | ($189) |
| **Total** | | | | **($33,055)** | **($3,190)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $171,459 |
| b. Normal cost at December 31, 2010 | 15,385 |
| c. Benefit payments during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 14,948 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 201,792 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 201,792 |
| 2. Actuarial accrued liability at December 31, 2011 | 197,980 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 3,812 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 214,440 |
| b. Contributions for 2011[1] | 11,350 |
| c. Benefit payments and expenses during 2011 | 0 |
| d. Interest at 8.0% to December 31, 2011 | 17,609 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 243,400 |
| 5. Actuarial value of assets at December 31, 2011 | 231,035 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (12,365) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($8,553)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($42,981)** |
| 2. Expected increase | 1,373 |
| 3. Liability (gain)/loss | (3,812) |
| 4. Asset (gain)/loss | 12,365 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($33,055)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 16,252 | 82,111 | 19.79% | 15,385 | 79,841 | 19.27% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$16,252** | **$82,111** | **19.79%** | **$15,385** | **$79,841** | **19.27%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($33,055) | ($42,981) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (3,190) | (3,775) |
| 3. Combined valuation payroll | 82,111 | 79,841 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (3.88%) | (4.73%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 19.79% | 19.27% |
| b. Tier 1/Tier 2 UAL rate | (3.88%) | (4.73%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.04% | 14.66% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 15.16% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.16% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 3.03% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.03% |
| c. Funded percentage | 117% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.03% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 12.13% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 18.19% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.04% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (3.88%) |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (3.88%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.04% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 19.79% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 19.79% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.04% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 19.79% | 19.27% |
| b. Tier 1/Tier 2 UAL rate | (3.88%) | (4.73%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 16.04% | 14.66% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 0 | 82,111 | 82,111 |
| Tier 1/Tier 2 valuation payroll | 0 | 82,111 | 82,111 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$0** | **$82,111** | **$82,111** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| Total | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Grand Total Number of Members** | **0** | **1** | **0** | **1** | **0** | **1** | **0** | **1** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | | | | | | | | |
| **45-49** | | | | | | | | | | |
| **50-54** | | | | | | | | | | |
| **55-59** | | | | | | | | | | |
| **60-64** | | | 1 | | | | | | | **1** |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | | **1** | | | | | | | **1** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | | |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members’ regular account balances.<br>8.25% compounded annually on members’ variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

West Valley Fire District/2725
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

September 28, 2012
West Valley Fire District/2725

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### West Valley Fire District -- #2725

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for West Valley Fire District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to West Valley Fire District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for West Valley Fire District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 14.77% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.15%) | (0.15%) | (0.15%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **14.77%** | **6.27%** | **9.00%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **15.36%** | **6.76%** | **9.49%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 101%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 14.62% | 14.62% |
| Minimum July 1, 2015 Rate | 11.62% | 8.62% |
| Maximum July 1, 2015 Rate | 17.62% | 20.62% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 7 |
| Amortization factor | 17.175 | 6.308 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 15.13% | (2.03%) | (2.03%) |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.78% | 0.01% | 0.01% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $427,344 | $382,258 | ($45,086) | 112% | $236,706 | (19%) |
| 12/31/2007 | 489,272 | 443,280 | (45,992) | 110% | 254,532 | (18%) |
| 12/31/2008 | 374,665 | 523,601 | 148,936 | 72% | 282,551 | 53% |
| 12/31/2009 | 467,780 | 426,605 | (41,175) | 110% | 287,520 | (14%) |
| 12/31/2010 | 556,619 | 497,630 | (58,989) | 112% | 490,715 | (12%) |
| 12/31/2011 | 596,571 | 590,253 | (6,318) | 101% | 457,183 | (1%) |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *West Valley Fire District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | ($6,318) | ($58,989) |
| Allocated pooled OPSRP UAL | 7,801 | 6,093 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 1,483 | (52,896) |
| Combined valuation payroll | 457,183 | 490,715 |
| Net pension UAL as a percentage of payroll | 0% | (11%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $11,844 | $17,655 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $28,049 | $22,564 |
| Tier 1/Tier 2 valuation payroll | 189,959 | 157,630 |
| Tier 1/Tier 2 pension normal cost rate | 14.77% | 14.31% |
| Tier 1/ Tier 2 Actuarial accrued liability | $590,253 | $497,630 |
| Actuarial asset value | 596,571 | 556,619 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | (6,318) | (58,989) |
| Tier 1/ Tier 2 Funded status | 101% | 112% |
| Combined valuation payroll | $457,183 | $490,715 |
| Tier 1/Tier 2 UAL as a percentage of payroll | (1%) | (12%) |
| Tier 1/Tier 2 UAL rate | (0.15%) | (0.90%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 3 | 3 |
| Tier 1/Tier 2 dormant members | 3 | 3 |
| Tier 1/Tier 2 retirees and beneficiaries | 5 | 4 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)*<br>RHIA | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 457,183 | 490,715 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $66,517 | $63,971 |
| 2. Employer reserves | 516,937 | 478,490 |
| 3. Benefits in force reserve | 13,117 | 14,158 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$596,571** | **$556,619** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $556,619 |
| 2. | Regular employer contributions | 27,567 |
| 3. | Benefit payments and expenses | (2,198) |
| 4. | Adjustments [2] | 745 |
| 5. | Interest credited | 13,839 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$596,571** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $11,128 | $8,395 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 16,921 | 14,169 |
| Tier 2 General Service | 0 | 0 |
| **Total** | **$28,049** | **$22,564** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $28,049 | $28,049 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $160,076 | $131,004 |
| ▪ Tier 1 General Service | 34,044 | 32,354 |
| ▪ Tier 2 Police & Fire | 366,576 | 298,649 |
| ▪ Tier 2 General Service | 0 | 0 |
| ▪ **Total Active Members** | **$560,696** | **$462,007** |
| Dormant Members | 5,700 | 12,311 |
| Retired Members and Beneficiaries | 23,857 | 23,312 |
| **Total Actuarial Accrued Liability** | **$590,253** | **$497,630** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $590,253 | $590,253 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $590,253 | $497,630 |
| 2. Actuarial value of assets | 596,571 | 556,619 |
| 3. Unfunded accrued liability *(1. – 2.)* | (6,318) | (58,989) |
| 4. Funded percentage *(2. ÷ 1.)* | 101% | 112% |
| 5. Combined valuation payroll | $457,183 | $490,715 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | (1%) | (12%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($92,035) | ($7,585) | ($7,040) | ($91,490) | ($7,869) |
| December 31, 2009 | $51,253 | $3,916 | $3,934 | $51,271 | $4,063 |
| December 31, 2011 | N/A | N/A | N/A | $33,901 | $2,504 |
| **Total** | | | | **($6,318)** | **($1,302)** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $497,630 |
| b. Normal cost at December 31, 2010 | 22,564 |
| c. Benefit payments during 2011 | (2,183) |
| d. Interest at 8.0% to December 31, 2011 | 41,528 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 559,539 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 559,539 |
| 2. Actuarial accrued liability at December 31, 2011 | 590,253 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | (30,714) |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 556,619 |
| b. Contributions for 2011[1] | 27,567 |
| c. Benefit payments and expenses during 2011 | (2,198) |
| d. Interest at 8.0% to December 31, 2011 | 45,544 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 627,532 |
| 5. Actuarial value of assets at December 31, 2011 | 596,571 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (30,961) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($61,675)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($58,989)** |
| 2. Expected increase | (9,004) |
| 3. Liability (gain)/loss | 30,714 |
| 4. Asset (gain)/loss | 30,961 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **($6,318)** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $11,128 | $98,602 | 11.29% | $8,395 | $79,343 | 10.58% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 16,921 | 91,357 | 18.52% | 14,169 | 78,287 | 18.10% |
| Tier 2 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| **Total** | **$28,049** | **$189,959** | **14.77%** | **$22,564** | **$157,630** | **14.31%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | ($6,318) | ($58,989) |
| 2. Next year's Tier 1/Tier 2 UAL payment | (1,302) | (5,014) |
| 3. Combined valuation payroll | 457,183 | 490,715 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | (0.28%) | (1.02%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.77% | 14.31% |
| b. Tier 1/Tier 2 UAL rate | (0.28%) | (1.02%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 14.62% | 13.41% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 15.13% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 15.13% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 3.03% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.03% |
| | c. Funded percentage | 101% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.03% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 12.10% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 18.16% |
| 7. | July 1, 2013 total pension rate, before adjustment | 14.62% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | (0.28%) |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.28%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 14.62% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 14.77% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 14.77% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 14.62% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 14.77% | 14.31% |
| b. Tier 1/Tier 2 UAL rate | (0.28%) | (1.02%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 14.62% | 13.41% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $98,602 | $98,602 |
| Tier 2 | 0 | 91,357 | 91,357 |
| Tier 1/Tier 2 valuation payroll | 0 | 189,959 | 189,959 |
| OPSRP valuation payroll | 7,251 | 259,973 | 267,224 |
| **Combined valuation payroll** | **$7,251** | **$449,932** | **$457,183** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 2 | 1 | 7 | 10 | 2 | 1 | 7 | 10 |
| Total | 2 | 1 | 7 | 10 | 2 | 1 | 7 | 10 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 1 | 0 | N/A | 1 | 1 | 0 | N/A | 1 |
| Police & Fire | 2 | 11 | N/A | 13 | 2 | 10 | N/A | 12 |
| Total | 3 | 11 | N/A | 14 | 3 | 10 | N/A | 13 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Police & Fire | 3 | 0 | 0 | 3 | 2 | 0 | 0 | 2 |
| Total | 3 | 0 | 0 | 3 | 2 | 1 | 0 | 3 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 5 | 0 | 0 | 5 | 4 | 0 | 0 | 4 |
| Total | 5 | 0 | 0 | 5 | 4 | 0 | 0 | 4 |
| **Grand Total Number of Members** | **13** | **12** | **7** | **32** | **11** | **12** | **7** | **30** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | | | | | | | | | |
| **30-34** | | | | | | | | | | |
| **35-39** | | | | | | | | | | |
| **40-44** | | | 1 | | | | | | | **1** |
| **45-49** | | | | | 1 | | | | | **1** |
| **50-54** | | 1 | | | | | | | | **1** |
| **55-59** | | | | | | | | | | |
| **60-64** | | | | | | | | | | |
| **65-69** | | | | | | | | | | |
| **70-74** | | | | | | | | | | |
| **75+** | | | | | | | | | | |
| **Total** | | **1** | **1** | | **1** | | | | | **3** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | | |
| **35-39** | 1 | 27 |
| **40-44** | | |
| **45-49** | | |
| **50-54** | 1 | |
| **55-59** | | |
| **60-64** | | |
| **65-69** | 1 | 365 |
| **70-74** | | |
| **75+** | | |
| **Total** | 3 | 131 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | 2 | 17 |
| **45-49** | | |
| **50-54** | | |
| **55-59** | 1 | 56 |
| **60-64** | | |
| **65-69** | 1 | 21 |
| **70-74** | | |
| **75-79** | 1 | 51 |
| **80-84** | | |
| **85-89** | | |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 5 | 32 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 "tax remedy" adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Weston Cemetery/2686
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

September 28, 2012
Weston Cemetery/2686

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Weston Cemetery/2686

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA | Scott D. Preppernau, FSA, EA |
| Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Weston Cemetery -- #2686

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Weston Cemetery to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Weston Cemetery.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Weston Cemetery*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 13.29% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.98%) | (0.98%) | (0.98%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **12.46%** | **5.44%** | **8.17%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **13.05%** | **5.93%** | **8.66%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 78%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 12.31% | 12.31% |
| Minimum July 1, 2015 Rate | 9.31% | 6.31% |
| Maximum July 1, 2015 Rate | 15.31% | 18.31% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.33% | 4.05% | 4.05% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 52.83% | 39.54% | 39.54% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

#### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $114,942 | $188,463 | $73,521 | 61% | $20,799 | 353% |
| 12/31/2007 | 119,082 | 99,674 | (19,408) | 119% | 20,760 | (93%) |
| 12/31/2008 | 85,842 | 99,205 | 13,363 | 87% | 20,406 | 65% |
| 12/31/2009 | 95,306 | 108,235 | 12,929 | 88% | 18,996 | 68% |
| 12/31/2010 | 99,997 | 118,986 | 18,989 | 84% | 23,703 | 80% |
| 12/31/2011 | 94,356 | 120,406 | 26,050 | 78% | 3,845 | 678% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

#### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Weston Cemetery*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $26,050 | $18,989 |
| Allocated pooled OPSRP UAL | 66 | 294 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 26,116 | 19,283 |
| Combined valuation payroll | 3,845 | 23,703 |
| Net pension UAL as a percentage of payroll | 679% | 81% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $100 | $853 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $511 | $2,849 |
| Tier 1/Tier 2 valuation payroll | 3,845 | 23,703 |
| Tier 1/Tier 2 pension normal cost rate | 13.29% | 12.02% |
| Tier 1/ Tier 2 Actuarial accrued liability | $120,406 | $118,986 |
| Actuarial asset value | 94,356 | 99,997 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 26,050 | 18,989 |
| Tier 1/ Tier 2 Funded status | 78% | 84% |
| Combined valuation payroll | $3,845 | $23,703 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 678% | 80% |
| Tier 1/Tier 2 UAL rate | (0.98%) | (0.31%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 0 | 1 |
| Tier 1/Tier 2 dormant members | 1 | 2 |
| Tier 1/Tier 2 retirees and beneficiaries | 2 | 1 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | December 31, 2011 | December 31, 2010 |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 3,845 | 23,703 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $2,463 | $11,695 |
| 2. Employer reserves | 37,681 | 42,484 |
| 3. Benefits in force reserve | 54,212 | 45,818 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$94,356** | **$99,997** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | December 31, 2010 to December 31, 2011 |
|---|---|
| 1. Market value of assets at beginning of year | $99,997 |
| 2. Regular employer contributions | 4,330 |
| 3. Benefit payments and expenses | (9,083) |
| 4. Adjustments[2] | (3,160) |
| 5. Interest credited | 2,273 |
| 6. Total transferred from side accounts | 0 |
| **7. Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$94,356** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

### *Summary of Normal Cost by Tier/Member Classification*

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 511 | 2,849 |
| **Total** | **$511** | **$2,849** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Normal Cost | $511 | $511 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 4,863 | 4,534 |
| ▪ **Total Active Members** | **$4,863** | **$4,534** |
| Dormant Members | 16,946 | 39,011 |
| Retired Members and Beneficiaries | 98,597 | 75,441 |
| **Total Actuarial Accrued Liability** | **$120,406** | **$118,986** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $120,406 | $120,406 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $120,406 | $118,986 |
| 2. Actuarial value of assets | 94,356 | 99,997 |
| 3. Unfunded accrued liability *(1. – 2.)* | 26,050 | 18,989 |
| 4. Funded percentage *(2. ÷ 1.)* | 78% | 84% |
| 5. Combined valuation payroll | $3,845 | $23,703 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 678% | 80% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($19,801) | ($1,632) | ($1,515) | ($19,684) | ($1,693) |
| December 31, 2009 | $32,881 | $2,512 | $2,524 | $32,893 | $2,606 |
| December 31, 2011 | N/A | N/A | N/A | $12,841 | $948 |
| **Total** | | | | **$26,050** | **$1,861** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $118,986 |
| b. Normal cost at December 31, 2010 | 2,849 |
| c. Benefit payments during 2011 | (9,023) |
| d. Interest at 8.0% to December 31, 2011 | 9,386 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 122,198 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 122,198 |
| 2. Actuarial accrued liability at December 31, 2011 | 120,406 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 1,792 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 99,997 |
| b. Contributions for 2011[1] | 4,330 |
| c. Benefit payments and expenses during 2011 | (9,083) |
| d. Interest at 8.0% to December 31, 2011 | 7,810 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 103,053 |
| 5. Actuarial value of assets at December 31, 2011 | 94,356 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (8,697) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($6,905)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$18,989** |
| 2. Expected increase | 156 |
| 3. Liability (gain)/loss | (1,792) |
| 4. Asset (gain)/loss | 8,697 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$26,050** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 511 | 3,845 | 13.29% | 2,849 | 23,703 | 12.02% |
| **Total** | **$511** | **$3,845** | **13.29%** | **$2,849** | **$23,703** | **12.02%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $26,050 | $18,989 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 1,861 | 1,316 |
| 3. Combined valuation payroll | 3,845 | 23,703 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 48.40% | 5.55% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.29% | 12.02% |
| b. Tier 1/Tier 2 UAL rate | 48.40% | 5.55% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 61.82% | 17.69% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 78% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.60% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.11% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 12.31% |
| 7. July 1, 2013 total pension rate, before adjustment | 61.82% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (49.51%) |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 48.40% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (1.11%) |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 12.31% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 13.29% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 13.29% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 12.31% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 13.29% | 12.02% |
| b. Tier 1/Tier 2 UAL rate | (1.11%) | (0.43%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c., minimum of 5.41%)* | 12.31% | 11.71% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 3,845 | 0 | 3,845 |
| Tier 1/Tier 2 valuation payroll | 3,845 | 0 | 3,845 |
| OPSRP valuation payroll | 0 | 0 | 0 |
| **Combined valuation payroll** | **$3,845** | **$0** | **$3,845** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 2 | N/A | 2 | 0 | 1 | N/A | 1 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 2 | N/A | 2 | 0 | 1 | N/A | 1 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 0 | 0 | 2 | 1 | 0 | 0 | 1 |
| **Grand Total Number of Members** | **2** | **3** | **0** | **5** | **2** | **3** | **0** | **5** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| Age | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | | | | | | | | |
| 55-59 | | | | | | | | | | |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| Total | | | | | | | | | | |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | 1 | 206 |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| Total | 1 | 206 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 143 |
| 65-69 | | |
| 70-74 | | |
| 75-79 | 1 | 745 |
| 80-84 | | |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| Total | 2 | 444 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Winchester Bay Sanitary District/2714
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Winchester Bay Sanitary District/2714

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

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# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

Winchester Bay Sanitary District -- #2714

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Winchester Bay Sanitary District to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Winchester Bay Sanitary District.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Winchester Bay Sanitary District*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | **Tier 1 / Tier 2** | **General Service** | **Police & Fire** |
| **Pension** | | | |
| Normal cost rate | 12.57% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | 3.71% | 3.71% | 3.71% |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **16.43%** | **10.13%** | **12.86%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **17.02%** | **10.62%** | **13.35%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 73%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 16.28% | 16.28% |
| Minimum July 1, 2015 Rate | 13.02% | 9.76% |
| Maximum July 1, 2015 Rate | 19.54% | 22.80% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

*Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| **ARC Disclosure** | **July 1, 2013 to June 30, 2015** | **July 1, 2011 to June 30, 2013** |
|---|---|---|
| Equivalent single amortization period | 18 | 30 |
| Amortization factor | 12.844 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 14.78% | 2.84% | 2.84% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 16.28% | 3.71% | 3.71% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $188,897 | $179,108 | ($9,788) | 105% | $99,248 | (10%) |
| 12/31/2007 | 200,678 | 186,803 | (13,875) | 107% | 96,322 | (14%) |
| 12/31/2008 | 129,283 | 199,044 | 69,761 | 65% | 99,241 | 70% |
| 12/31/2009 | 151,074 | 216,670 | 65,596 | 70% | 138,874 | 47% |
| 12/31/2010 | 168,693 | 228,660 | 59,967 | 74% | 139,258 | 43% |
| 12/31/2011 | 170,661 | 234,713 | 64,052 | 73% | 138,822 | 46% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Winchester Bay Sanitary District*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $64,052 | $59,967 |
| Allocated pooled OPSRP UAL | 2,369 | 1,729 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 66,421 | 61,696 |
| Combined valuation payroll | 138,822 | 139,258 |
| Net pension UAL as a percentage of payroll | 48% | 44% |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $3,596 | $5,010 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer's combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $12,808 | $12,635 |
| Tier 1/Tier 2 valuation payroll | 101,866 | 103,219 |
| Tier 1/Tier 2 pension normal cost rate | 12.57% | 12.24% |
| Tier 1/ Tier 2 Actuarial accrued liability | $234,713 | $228,660 |
| Actuarial asset value | 170,661 | 168,693 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 64,052 | 59,967 |
| Tier 1/ Tier 2 Funded status | 73% | 74% |
| Combined valuation payroll | $138,822 | $139,258 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 46% | 43% |
| Tier 1/Tier 2 UAL rate<br>(includes Multnomah Fire District #10) | 3.71% | 3.35% |
| Tier 1/Tier 2 active members [1] | 2 | 2 |
| Tier 1/Tier 2 dormant members | 0 | 0 |
| Tier 1/Tier 2 retirees and beneficiaries | 3 | 3 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 138,822 | 139,258 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $14,573 | $14,086 |
| 2. Employer reserves | 93,675 | 80,645 |
| 3. Benefits in force reserve | 62,413 | 73,962 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$170,661** | **$168,693** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $168,693 |
| 2. | Regular employer contributions | 11,096 |
| 3. | Benefit payments and expenses | (10,457) |
| 4. | Adjustments[2] | (2,298) |
| 5. | Interest credited | 3,627 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year *(1. + 2. + 3. + 4. + 5. + 6.)*** | **$170,661** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $0 | $0 |
| Tier 1 General Service | 0 | 0 |
| Tier 2 Police & Fire | 0 | 0 |
| Tier 2 General Service | 12,808 | 12,635 |
| **Total** | **$12,808** | **$12,635** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $12,808 | $12,808 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | **December 31, 2011** | **December 31, 2010** |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $0 | $0 |
| ▪ Tier 1 General Service | 0 | 0 |
| ▪ Tier 2 Police & Fire | 0 | 0 |
| ▪ Tier 2 General Service | 121,200 | 106,878 |
| ▪ **Total Active Members** | **$121,200** | **$106,878** |
| Dormant Members | 0 | 0 |
| Retired Members and Beneficiaries | 113,513 | 121,782 |
| **Total Actuarial Accrued Liability** | **$234,713** | **$228,660** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | **Before Changes** | **After Changes** | **Net Change** |
|---|---|---|---|
| Actuarial Accrued Liability | $234,713 | $234,713 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $234,713 | $228,660 |
| 2. Actuarial value of assets | 170,661 | 168,693 |
| 3. Unfunded accrued liability *(1. – 2.)* | 64,052 | 59,967 |
| 4. Funded percentage *(2. ÷ 1.)* | 73% | 74% |
| 5. Combined valuation payroll | $138,822 | $139,258 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 46% | 43% |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($16,077) | ($1,326) | ($1,230) | ($15,981) | ($1,376) |
| December 31, 2009 | $81,961 | $6,261 | $6,290 | $81,990 | $6,496 |
| December 31, 2011 | N/A | N/A | N/A | ($1,957) | ($145) |
| **Total** | | | | **$64,052** | **$4,975** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $228,660 |
| b. Normal cost at December 31, 2010 | 12,635 |
| c. Benefit payments during 2011 | (10,388) |
| d. Interest at 8.0% to December 31, 2011 | 18,888 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 249,795 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 249,795 |
| 2. Actuarial accrued liability at December 31, 2011 | 234,713 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 15,082 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 168,693 |
| b. Contributions for 2011[1] | 11,096 |
| c. Benefit payments and expenses during 2011 | (10,457) |
| d. Interest at 8.0% to December 31, 2011 | 13,521 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 182,853 |
| 5. Actuarial value of assets at December 31, 2011 | 170,661 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (12,192) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **$2,890** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **$59,967** |
| 2. Expected increase | 6,975 |
| 3. Liability (gain)/loss | (15,082) |
| 4. Asset (gain)/loss | 12,192 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$64,052** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate | Normal Cost | Employer Tier 1/Tier 2 Valuation Payroll | Normal Cost Rate |
| Tier 1 Police & Fire | $0 | $0 | 0.00% | $0 | $0 | 0.00% |
| Tier 1 General Service | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 Police & Fire | 0 | 0 | 0.00% | 0 | 0 | 0.00% |
| Tier 2 General Service | 12,808 | 101,866 | 12.57% | 12,635 | 103,219 | 12.24% |
| **Total** | **$12,808** | **$101,866** | **12.57%** | **$12,635** | **$103,219** | **12.24%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $64,052 | $59,967 |
| 2. Next year's Tier 1/Tier 2 UAL payment | 4,975 | 4,498 |
| 3. Combined valuation payroll | 138,822 | 139,258 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 3.58% | 3.23% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.57% | 12.24% |
| b. Tier 1/Tier 2 UAL rate | 3.58% | 3.23% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 16.28% | 15.59% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | |
|---|---|
| 1. Current net Tier 1/Tier 2 pension contribution rate | 14.31% |
| 2. Employer contribution rate attributable to side accounts | 0.00% |
| 3. Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 14.31% |
| 4. Size of rate collar | |
| a. 20% of current employer contribution rate *(20% x 3.)* | 2.86% |
| b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| c. Funded percentage | 73% |
| d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 5.10% |
| 5. July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 9.21% |
| 6. July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 19.41% |
| 7. July 1, 2013 total pension rate, before adjustment | 16.28% |
| 8. Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | 0.00% |
| 9. July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 3.58% |
| 10. July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | 3.58% |
| 11. July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 16.28% |
| 12. Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.57% |
| 15. July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.57% |
| 16. July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 16.28% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.57% | 12.24% |
| b. Tier 1/Tier 2 UAL rate | 3.58% | 3.23% |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 16.28% | 15.59% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $0 | $0 | $0 |
| Tier 2 | 101,866 | 0 | 101,866 |
| Tier 1/Tier 2 valuation payroll | 101,866 | 0 | 101,866 |
| OPSRP valuation payroll | 36,956 | 0 | 36,956 |
| **Combined valuation payroll** | **$138,822** | **$0** | **$138,822** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 0 | 2 | 1 | 3 | 0 | 2 | 1 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 2 | 1 | 3 | 0 | 2 | 1 | 3 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Police & Fire | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| Total | 0 | 0 | N/A | 0 | 0 | 0 | N/A | 0 |
| **Dormant Members** | | | | | | | | |
| General Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 3 |
| Police & Fire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 3 |
| **Grand Total Number of Members** | **3** | **2** | **1** | **6** | **3** | **2** | **1** | **6** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Age | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
| 0-20 | | | | | | | | | | |
| 20-24 | | | | | | | | | | |
| 25-29 | | | | | | | | | | |
| 30-34 | | | | | | | | | | |
| 35-39 | | | | | | | | | | |
| 40-44 | | | | | | | | | | |
| 45-49 | | | | | | | | | | |
| 50-54 | | | 1 | | | | | | | **1** |
| 55-59 | | 1 | | | | | | | | **1** |
| 60-64 | | | | | | | | | | |
| 65-69 | | | | | | | | | | |
| 70-74 | | | | | | | | | | |
| 75+ | | | | | | | | | | |
| **Total** | | **1** | **1** | | | | | | | **2** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| 0-20 | | |
| 20-24 | | |
| 25-29 | | |
| 30-34 | | |
| 35-39 | | |
| 40-44 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | | |
| 65-69 | | |
| 70-74 | | |
| 75+ | | |
| **Total** | | |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| 0-45 | | |
| 45-49 | | |
| 50-54 | | |
| 55-59 | | |
| 60-64 | 1 | 296 |
| 65-69 | | |
| 70-74 | | |
| 75-79 | | |
| 80-84 | 2 | 463 |
| 85-89 | | |
| 90-94 | | |
| 95-99 | | |
| 100+ | | |
| **Total** | 3 | 407 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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September 28, 2012

Yamhill County/2015
Oregon Public Employees Retirement System

Dear Sir or Madam:

As part of our engagement with the Oregon Public Employees Retirement Board, we performed a system-wide actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2011. The attached report, which is an informational supplement to the system-wide report, provides you with employer-specific contribution rates that will become effective July 1, 2013. Information is also provided to assist you in preparing your required financial reporting disclosures under Statements 27 and 45 of the Governmental Accounting Standards Board.

This report reflects the benefit provisions in effect as of December 31, 2011. The full development of the valuation results for the OPSRP and Retiree Health Insurance Account (RHIA) programs can be found in the separate system-wide actuarial valuation report. Costs of the IAP (Individual Account Program) are not included in this or the system-wide report. Further, costs of pension obligation bond payments are not included in this or the system-wide report.

**If you have any questions about this report, please contact Debra Hembree, Manager, Actuarial Analysis Section at Oregon PERS, at 503 603 7704 or Debra.Hembree@state.or.us.**

## Contents of Report

The executive summary provides the basic information you need including:

- Contribution rates for Tier 1/Tier 2, OPSRP general service, and OPSRP police and fire payroll,
- Information to assist you in completing GASB 27 and GASB 45 financial reporting requirements, and
- A summary of principal valuation results.

The remainder of the report provides additional information including:

- Side account balances, transactions and rate relief,
- Detailed development of Tier 1/Tier 2 valuation results,
- A brief summary of methods and assumptions, and
- A brief summary of any changes in System benefit provisions.

Additional information is provided in the system-wide valuation report, which is available at www.oregon.gov/PERS/section/financial_reports/financials.shtml.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, System benefit provisions as defined by statute, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

A valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While a valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in July 2011.

Some of the actuarial computations presented in this report are for purposes of determining the contribution rates effective from July 2013 to June 2015 for System employers. Other actuarial computations presented in this report under GASB Statements No. 27 and 45 are for purposes of assisting System employers in fulfilling their financial reporting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions described in the appendixes of this report, and of GASB Statements No. 27 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman

September 28, 2012
Yamhill County/2015

This report is prepared solely for the use and benefit of the Oregon Public Employees Retirement System, the employer named above, or its auditors solely for the purpose of completing an audit related to the matters herein. To the extent that this report is not subject to disclosure under applicable public records laws, it may not be provided to other third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. Milliman's consent to release this report to any third party may be conditioned on the third party signing a release except for situations where such release is prohibited by law.

No third party recipient of this report should rely upon Milliman's work contained herein. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Matthew R. Larrabee, FSA, EA
Consulting Actuary

Scott D. Preppernau, FSA, EA
Consulting Actuary

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

# ACTUARIAL VALUATION REPORT
# DECEMBER 31, 2011

## OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

### INDEPENDENT EMPLOYERS

### Yamhill County -- #2015

SEPTEMBER 2012

# CONTENTS

# Executive Summary

Milliman has prepared this report for Yamhill County to:

- Provide employer-specific contribution rates effective July 1, 2013 through June 30, 2015.
- Provide summary December 31, 2011, valuation results for the Oregon Public Service Retirement Plan (OPSRP) and the Retiree Healthcare Insurance Account (RHIA),
- Provide employer-specific valuation results for side accounts and Tier 1/Tier 2 assets and liabilities as of December 31, 2011, and
- Provide reporting and disclosure information for financial statements for governmental agencies and pursuant to GASB Statements Number 27 and 45.

This report summarizes the valuation results for OPSRP and RHIA. The full development of these results can be found in the December 31, 2011, system-wide valuation report. This report develops employer-specific Tier 1/Tier 2 and side account rates and applies the results from the system-wide valuation to Yamhill County.

## Employer Contribution Rates

The following table summarizes the employer contribution rates effective July 1, 2013 through June 30, 2015, for each type of payroll. There are separate normal cost rates for each of the payrolls based on the benefit structure supported by that payroll. The other rates apply to all payrolls regardless of the benefit structure to which they are attributed.

### *Employer Rates Effective July 1, 2013 for Yamhill County*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **Pension** | | | |
| Normal cost rate | 12.57% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL rate [1] | (0.86%) | (0.86%) | (0.86%) |
| OPSRP UAL rate | 0.15% | 0.15% | 0.15% |
| Side account rate relief | 0.00% | 0.00% | 0.00% |
| **Net pension contribution rate** | **11.86%** | **5.56%** | **8.29%** |
| **Retiree Healthcare** | | | |
| Normal cost rate | 0.10% | 0.00% | 0.00% |
| UAL rate | 0.49% | 0.49% | 0.49% |
| **Net retiree healthcare rate** | **0.59%** | **0.49%** | **0.49%** |
| **Total net employer contribution rate** | **12.45%** | **6.05%** | **8.78%** |

In this report, the payroll of Tier 1 and Tier 2 members is referred to as Tier 1/Tier 2 valuation payroll. Combined valuation payroll refers to the payroll for Tier 1/Tier 2 members, OPSRP general service members and OPSRP police and fire members.

[1] *Includes Multnomah Fire District #10 rate.*

# Executive Summary

## Employer Contribution Rates (continued)

### *Range of Potential Tier 1/Tier 2 Employer Contribution Rates for the July 2015 to June 2017 Biennium*

The rate collar limits changes in contribution rates, but does not limit changes in rates due to side accounts. The table below shows the possible minimum and maximum rates first effective as of July 1, 2015, which will depend on the funded status as of December 31, 2013. If an employer's funded status excluding side accounts is less than 70 percent or greater than 130 percent, the rate collar doubles in size. If an employer's funded status excluding side accounts is between 70 and 80 percent or between 120 and 130 percent, the size of the rate collar is increased on a graded scale. Also, please note that by Board policy, independent employers with less than 2,500 employees cannot have a Tier 1/Tier 2 pension rate less than 6 percent of payroll (excludes side accounts and OPSRP UAL rates). The rates shown are before any adjustment for side account offsets or the 6 percent minimum independent employer contribution rate.

For comparison, the funded status as of December 31, 2011 is 93%.

| Funded Status as of December 31, 2013 | 80% to 120% | Under 70% or Over 130% |
|---|---|---|
| July 1, 2013 Normal Cost and Tier 1/Tier 2 UAL Rate | 11.71% | 11.71% |
| Minimum July 1, 2015 Rate | 8.71% | 5.71% |
| Maximum July 1, 2015 Rate | 14.71% | 17.71% |

# Executive Summary

## Accounting Information

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist the employer in completing its financial statements, but any accounting determination should be reviewed by your auditor.

### *Pension*

We understand that non-pooled employers are considered to be participating in an Agent-Multiple Employer plan for purposes of their Tier 1/Tier 2 pension liabilities and a cost sharing plan for purposes of their OPSRP pension liabilities under Statement No. 27 of the Governmental Accounting Standards Board (GASB 27). The following information is provided to assist in completion of the disclosures required.

#### *Annual Required Contribution/Contractually Required Contribution*

The Annual Required Contribution (ARC) for the Tier 1/Tier 2 pension liabilities and the contractually required contribution for OPSRP for the period July 1, 2013 to June 30, 2015 are based on this valuation. The ARC and the contractually required contribution for the period from July 1, 2011 to June 30, 2013 are both based on the December 31, 2009 valuation.

Because the actuarial and rate smoothing methodologies do not always produce a contribution rate that qualifies as an ARC due to multiple amortization bases, the rate collar, and the minimum contribution rate, the equivalent single amortization period is calculated based on the contribution rate. If the equivalent single amortization period is less than 30, the ARC equals the contribution rate. If not, the ARC differs from the contribution rate and equals the normal cost plus a 30-year amortization of the UAL. The equivalent single amortization period and the amortization factor used for the ARC are shown in the table below.

| ARC Disclosure | July 1, 2013 to June 30, 2015 | July 1, 2011 to June 30, 2013 |
|---|---|---|
| Equivalent single amortization period | 30 | 30 |
| Amortization factor | 17.175 | 17.175 |

# Executive Summary

## Accounting Information (continued)

### *Annual Required Contribution/Contractually Required Contribution (continued)*

The ARC and the contractually required contribution are expressed as contribution rates that are applied to the appropriate payroll for the contribution rate period. The ARCs and contractually required contributions for each payroll are shown in the table below.

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| **July 1, 2011 to June 30, 2013** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 12.10% | 0.02% | 0.02% |
| OPSRP Contractually Required Contribution | 0.08% | 6.21% | 8.92% |
| **July 1, 2013 to June 30, 2015** | | | |
| Tier 1/Tier 2 Annual Required Contribution [1] | 13.65% | 1.08% | 1.08% |
| OPSRP Contractually Required Contribution | 0.15% | 6.42% | 9.15% |

[1] *Note that it is mathematically possible for the ARC to be negative. Question 131 of the Guide to the Implementation of GASB Statements 25, 26, and 27 indicates that it is common practice to set the ARC at zero if it would otherwise be negative. The figures shown above for the 2011-2013 and 2013-2015 biennia have not been limited to zero. The appropriate disclosure should be discussed with your auditor.*

# Executive Summary

## Accounting Information (continued)

### *Required Supplementary Information*

### *Schedule of Funding Progress*

The Schedule of Funding Progress is required for the Tier 1/Tier 2 pension liabilities. The table below shows the schedule for the last several valuations. For employers with side accounts, the actuarial value of assets in this Schedule includes the value of the employer's side accounts.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (b - a) | Funded Ratio (a ÷ b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a) ÷ c) |
|---|---|---|---|---|---|---|
| 12/31/2006 | $48,378,680 | $35,252,368 | ($13,126,311) | 137% | $18,238,600 | (72%) |
| 12/31/2007 | 53,483,124 | 38,797,756 | (14,685,368) | 138% | 19,196,097 | (77%) |
| 12/31/2008 | 39,730,256 | 42,184,835 | 2,454,579 | 94% | 20,819,666 | 12% |
| 12/31/2009 | 46,262,877 | 45,990,333 | (272,544) | 101% | 21,770,669 | (1%) |
| 12/31/2010 | 50,594,864 | 50,082,170 | (512,694) | 101% | 22,476,974 | (2%) |
| 12/31/2011 | 49,368,116 | 53,073,411 | 3,705,295 | 93% | 21,695,391 | 17% |

### *Retiree Healthcare*

The Retiree Health Insurance Account (RHIA) is a cost-sharing pool under Statement No. 45 of the Governmental Accounting Standards Board (GASB 45). Consequently, each employer reports the contractually required contribution. The contractually required contribution for retiree healthcare liabilities for the period July 1, 2013 through June 30, 2015 was calculated as a part of this valuation, and is expressed as contribution rates that are applied to the appropriate payroll. The rates and appropriate payroll are shown in the table below.

### *Contractually Required Contribution Rate*

| | Payroll | | |
|---|---|---|---|
| | | OPSRP | |
| | Tier 1 / Tier 2 | General Service | Police & Fire |
| July 1, 2011 to June 30, 2013 | 0.59% | 0.50% | 0.50% |
| July 1, 2013 to June 30, 2015 | 0.59% | 0.49% | 0.49% |

# Executive Summary

## Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described later in this report. More detailed information can be found in the system-wide report.

### *Yamhill County*

| | Actuarial Valuation as of | |
|---|---|---|
| | **December 31 2011** | **December 31 2010** |
| T1/T2 UAL | $3,705,295 | ($512,694) |
| Allocated pooled OPSRP UAL | 370,175 | 279,080 |
| Side account | 0 | 0 |
| Net unfunded pension actuarial accrued liability | 4,075,470 | (233,614) |
| Combined valuation payroll | 21,695,391 | 22,476,974 |
| Net pension UAL as a percentage of payroll | 19% | (1%) |
| Calculated side account rate relief | 0.00% | 0.00% |
| Allocated pooled RHIA UAL | $562,030 | $808,686 |

*UAL amounts for the pools (OPSRP and RHIA) are allocated pro-rata based on the ratio of an employer’s combined valuation payroll to that of the applicable pool.*

# Executive Summary

## Principal Valuation Results (continued)

### *Tier 1/Tier 2*

| | Actuarial Valuation as of | |
|---|---|---|
| | December 31, 2011 | December 31, 2010 |
| Normal cost | $1,592,580 | $1,725,665 |
| Tier 1/Tier 2 valuation payroll | 12,668,214 | 13,980,629 |
| Tier 1/Tier 2 pension normal cost rate | 12.57% | 12.34% |
| Tier 1/ Tier 2 Actuarial accrued liability | $53,073,411 | $50,082,170 |
| Actuarial asset value | 49,368,116 | 50,594,864 |
| Tier 1/Tier 2 Unfunded actuarial accrued liability | 3,705,295 | (512,694) |
| Tier 1/ Tier 2 Funded status | 93% | 101% |
| Combined valuation payroll | $21,695,391 | $22,476,974 |
| Tier 1/Tier 2 UAL as a percentage of payroll | 17% | (2%) |
| Tier 1/Tier 2 UAL rate | (0.86%) | (0.63%) |
| (includes Multnomah Fire District #10) | | |
| Tier 1/Tier 2 active members [1] | 222 | 250 |
| Tier 1/Tier 2 dormant members | 102 | 89 |
| Tier 1/Tier 2 retirees and beneficiaries | 148 | 136 |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Executive Summary

## Principal Valuation Results (continued)

### *OPSRP*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| | **December 31, 2011** | **December 31, 2010** |
| General service normal cost | $165.3 | $154.7 |
| OPSRP general service valuation payroll | 2,634.7 | 2,541.9 |
| General service normal cost rate | 6.27% | 6.08% |
| Police and fire normal cost | $27.7 | $24.5 |
| OPSRP police and fire valuation payroll | 307.9 | 277.8 |
| Police and fire normal cost rate | 9.00% | 8.82% |
| Actuarial accrued liability | $986.4 | $767.6 |
| Actuarial asset value | 840.5 | 659.0 |
| Unfunded actuarial accrued liability | 145.9 | 108.6 |
| Funded status | 85% | 86% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 2% | 1% |
| UAL rate | 0.15% | 0.10% |

### *Retiree Healthcare*

| *($ in millions)* | Actuarial Valuation as of | |
|---|---|---|
| RHIA | **December 31, 2011** | **December 31, 2010** |
| Normal cost | $5.8 | $6.0 |
| Tier 1 / Tier 2 valuation payroll | 5,607.9 | 5,930.3 |
| Normal cost rate | 0.10% | 0.10% |
| Actuarial accrued liability | $461.1 | $547.1 |
| Actuarial asset value | 239.6 | 232.3 |
| Unfunded actuarial accrued liability | 221.5 | 314.8 |
| Funded status | 52% | 42% |
| Combined valuation payroll | $8,550.5 | $8,750.1 |
| UAL as a percentage of payroll | 3% | 4% |
| UAL rate | 0.49% | 0.56% |

# Side Account Information

## Reconciliation of Side Accounts

The following table reconciles the total side account from the beginning of the year to the end of the year. Side account transfers were calculated by PERS and made on a monthly basis. The amount of these transfers is shown in the table below.

All information in this table has been provided by PERS.

| | New | Continuing | Total |
|---|---|---|---|
| **1. Side account as of December 31, 2010** | **N/A** | | |
| 2. Deposits made during 2011 | | N/A | |
| 3. Administrative expenses | | | |
| 4. Amount transferred to employer reserves during 2011 | | | |
| 5. Side account earnings during 2011 | | | |
| **6. Side account as of December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | | | |

# Side Account Information

## Side Account Balances

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Side account 1 | $0 | $0 |
| Side account 2 | 0 | 0 |
| Side account 3 | 0 | 0 |
| **Total** | **$0** | **$0** |

## Development of Side Account Rate

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period, and expressing the result as a percentage of combined valuation payroll. For side accounts established prior to December 31, 2009, the fixed period ends December 31, 2027. For side accounts established at a later date, the fixed period ends 18 years after the first rate-setting valuation following its creation.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total side account | $0 | $0 |
| 2. Combined valuation payroll | 21,695,391 | 22,476,974 |
| 3. Amortization factor | 11.626 | 12.134 |
| **4. Total side account rate *(-1. ÷ 2. ÷ 3.)*** [1] | 0.00% | 0.00% |

[1] *For employers with more than one side account, the Total Side Account Rate is determined by calculating the rate on each side account separately and adding the rates together.*

# Tier 1/Tier 2 Valuation Results

## Assets

A summary of the market value of pension assets, and reconciliation from the prior year are shown below.

### *Summary of Market Value of Tier 1/Tier 2 Pension Assets*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Member reserves[1] | $7,197,628 | $8,160,070 |
| 2. Employer reserves | 31,094,709 | 32,606,192 |
| 3. Benefits in force reserve | 11,075,779 | 9,828,601 |
| **4. Total market value of assets *(1. + 2. + 3.)*** | **$49,368,116** | **$50,594,864** |

The market value of member and employer reserves is provided by PERS. The benefits in force reserve provided by PERS is allocated each year among employers in proportion to their liabilities for benefits in force.

### *Reconciliation of Tier 1/Tier 2 Pension Assets*

| | | December 31, 2010 to December 31, 2011 |
|---|---|---|
| 1. | Market value of assets at beginning of year | $50,594,864 |
| 2. | Regular employer contributions | 589,516 |
| 3. | Benefit payments and expenses | (1,855,670) |
| 4. | Adjustments[2] | (1,179,354) |
| 5. | Interest credited | 1,218,761 |
| 6. | Total transferred from side accounts | 0 |
| **7.** | **Market value of assets at end of year** ***(1. + 2. + 3. + 4. + 5. + 6.)*** | **$49,368,116** |

[1] *For both the December 31, 2010 and December 31, 2011 valuation, reported member reserves were reduced to reflect the deficit status of the Tier 1 Rate Guarantee Reserve, as described in the system-wide report. The amount shown here is after this reduction.*

[2] *Note the adjustment item above includes a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, and other adjustments made by PERS.*

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Normal Cost*

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the amount that would need to be contributed each year to fund plan benefits.

*Summary of Normal Cost by Tier/Member Classification*

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Tier 1 Police & Fire | $252,838 | $342,369 |
| Tier 1 General Service | 77,971 | 94,741 |
| Tier 2 Police & Fire | 261,165 | 246,614 |
| Tier 2 General Service | 1,000,606 | 1,041,941 |
| **Total** | **$1,592,580** | **$1,725,665** |

### *Change in Tier 1/Tier 2 Normal Cost Due to Assumption Changes*

The following table shows the impact of the assumption changes on normal cost as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Normal Cost | $1,592,580 | $1,592,580 | $0 |

# Tier 1/Tier 2 Valuation Results

## Liabilities

### *Actuarial Accrued Liability*

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. If all actuarial assumptions are met, the actuarial accrued liability represents the amount that would need to be set aside to provide for the benefits already earned to date.

The table below shows the summary of the actuarial accrued liability by tier and member classification.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| Active Members | | |
| ▪ Tier 1 Police & Fire | $7,462,855 | $10,082,349 |
| ▪ Tier 1 General Service | 1,851,364 | 2,459,428 |
| ▪ Tier 2 Police & Fire | 3,370,634 | 2,906,392 |
| ▪ Tier 2 General Service | 14,996,943 | 14,275,409 |
| ▪ **Total Active Members** | **$27,681,796** | **$29,723,578** |
| Dormant Members | 5,247,696 | 4,175,285 |
| Retired Members and Beneficiaries | 20,143,919 | 16,183,307 |
| **Total Actuarial Accrued Liability** | **$53,073,411** | **$50,082,170** |

### *Change in Tier 1/Tier 2 Actuarial Accrued Liability Due to Assumption Changes*

The following table shows the impact of the assumption changes on the actuarial accrued liability as of December 31, 2011.

| | Before Changes | After Changes | Net Change |
|---|---|---|---|
| Actuarial Accrued Liability | $53,073,411 | $53,073,411 | $0 |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Summary of UAL*

The UAL represents the difference between the assets accumulated and the liability attributed to prior years of service by the cost method.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Actuarial accrued liability | $53,073,411 | $50,082,170 |
| 2. Actuarial value of assets | 49,368,116 | 50,594,864 |
| 3. Unfunded accrued liability *(1. – 2.)* | 3,705,295 | (512,694) |
| 4. Funded percentage *(2. ÷ 1.)* | 93% | 101% |
| 5. Combined valuation payroll | $21,695,391 | $22,476,974 |
| 6. Unfunded accrued liability as % of combined valuation payroll *(3. ÷ 5.)* | 17% | (2%) |

### *Reconciliation of UAL Bases*

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation establishes a 20-year closed-period amortization base for outstanding regular Tier 1/Tier 2 UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base is calculated based on the total Tier 1/Tier 2 UAL as of the valuation date less the remaining unamortized balance of any Tier 1/Tier 2 UAL bases established at previous odd-year valuation dates. In other words, Tier 1/Tier 2 experience from December 31, 2009 to December 31, 2011 is amortized on a 20-year basis starting from this December 31, 2011 valuation.

| Amortization Base | UAL December 31, 2010 | Payment | Interest | UAL December 31, 2011 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | ($15,547,677) | ($1,281,297) | ($1,189,271) | ($15,455,651) | ($1,329,346) |
| December 31, 2009 | $15,361,683 | $1,173,471 | $1,178,982 | $15,367,194 | $1,217,476 |
| December 31, 2011 | N/A | N/A | N/A | $3,793,752 | $280,168 |
| **Total** | | | | **$3,705,295** | **$168,298** |

# Tier 1/Tier 2 Valuation Results

## Unfunded Accrued Liability (UAL)

### *Actuarial Gain or Loss since Prior Valuation*

The system-wide report contains a detailed analysis of gains and losses since the last valuation. The table below shows the gain or loss for the individual employer.

| | |
|---|---|
| 1. Expected actuarial accrued liability | |
| a. Actuarial accrued liability at December 31, 2010 | $50,082,170 |
| b. Normal cost at December 31, 2010 | 1,725,665 |
| c. Benefit payments during 2011 | (1,843,507) |
| d. Interest at 8.0% to December 31, 2011 | 4,070,887 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | 54,035,215 |
| f. Change in actuarial accrued liability due to assumption changes | 0 |
| g. Expected actuarial accrued liability at December 31, 2011 *(e. + f.)* | 54,035,215 |
| 2. Actuarial accrued liability at December 31, 2011 | 53,073,411 |
| 3. Gain/(loss) on actuarial accrued liability *(1.g. – 2.)* | 961,804 |
| 4. Expected actuarial value of assets | |
| a. Actuarial value of assets at December 31, 2010 | 50,594,864 |
| b. Contributions for 2011[1] | 589,516 |
| c. Benefit payments and expenses during 2011 | (1,855,670) |
| d. Interest at 8.0% to December 31, 2011 | 3,996,943 |
| e. Expected actuarial value of assets at December 31, 2011 *(a. + b. + c. + d.)* | 53,325,652 |
| 5. Actuarial value of assets at December 31, 2011 | 49,368,116 |
| 6. Gain/(loss) on actuarial value of assets *(5. - 4.e.)* | (3,957,536) |
| **7. Total actuarial gain/(loss)** ***(3. + 6.)*** | **($2,995,732)** |

### *Unfunded Accrued Liability Reconciliation*

A reconciliation of the Tier 1/Tier 2 UAL from December 31, 2010, is provided below.

| | |
|---|---|
| **1. UAL at December 31, 2010** | **($512,694)** |
| 2. Expected increase | 1,222,257 |
| 3. Liability (gain)/loss | (961,804) |
| 4. Asset (gain)/loss | 3,957,536 |
| 5. Change due to changes in assumptions | 0 |
| **6. UAL at December 31, 2011** ***(1. + 2. + 3. + 4. + 5.)*** | **$3,705,295** |

[1] *Includes rate relief from side accounts and excludes contributions for Multnomah Fire District.*

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Normal Cost Rate*

For independent employers, the normal cost calculated previously is divided by expected payroll to determine a normal cost rate. The table below shows the development of the rate for each tier and member classification.

*Development of Tier 1/Tier 2 Normal Cost Rate*

| | December 31, 2011 | | | December 31, 2010 | | |
|---|---|---|---|---|---|---|
| | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** | **Normal Cost** | **Employer Tier 1/Tier 2 Valuation Payroll** | **Normal Cost Rate** |
| Tier 1 Police & Fire | $252,838 | $1,408,914 | 17.95% | $342,369 | $1,965,519 | 17.42% |
| Tier 1 General Service | 77,971 | 853,140 | 9.14% | 94,741 | 974,501 | 9.72% |
| Tier 2 Police & Fire | 261,165 | 1,789,677 | 14.59% | 246,614 | 1,746,196 | 14.12% |
| Tier 2 General Service | 1,000,606 | 8,616,483 | 11.61% | 1,041,941 | 9,294,413 | 11.21% |
| **Total** | **$1,592,580** | **$12,668,214** | **12.57%** | **$1,725,665** | **$13,980,629** | **12.34%** |

An independent employer that has no Tier 1/Tier 2 active payroll will be assigned the weighted average normal cost of all independent employers as calculated in the system-wide report.

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Development of Tier 1/Tier 2 UAL Rates*

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| 1. Total Tier 1/Tier 2 UAL | $3,705,295 | ($512,694) |
| 2. Next year's Tier 1/Tier 2 UAL payment | 168,298 | (131,953) |
| 3. Combined valuation payroll | 21,695,391 | 22,476,974 |
| 4. Tier 1/Tier 2 UAL rate *(2. ÷ 3)* | 0.78% | (0.59%) |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Pre-Rate Collar)*

The following table summarizes the employer's pension contribution rate for Tier 1/Tier 2. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates apply to combined valuation payroll. These rates do not reflect adjustments due to the rate collar, the minimum 6 percent rate for independent employers with fewer than 2,500 members, or side accounts.

| | **July 1, 2013 Rates calculated as of December 31, 2011** | **Advisory July 1, 2013 Rates calculated as of December 31, 2010** |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.57% | 12.34% |
| b. Tier 1/Tier 2 UAL rate | 0.78% | (0.59%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate *(a. + b. + c.)* | 13.48% | 11.87% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Adjustments Due to Rate Collar and Minimum Rate Requirements*

Employer contribution rates are generally limited to change by no more than the greater of 3 percentage points or 20 percent from the current contribution rate. However, if the funded percentage excluding side accounts is below 70 percent or above 130 percent the rate collar doubles in size. If the funded percentage excluding side accounts is between 70 and 80 percent or 120 and 130 percent, the size of the collar is increased on a graded scale. In addition, for independent employers with less than 2,500 active members, the net employer Tier 1/Tier 2 pension contribution rate cannot be less than 6 percent. All collar and minimum rate calculations are performed prior to adjustments for side accounts and the OPSRP UAL rate.

The table below shows the current contribution rate for the period from July 1, 2011 through June 30, 2013, develops the maximum and minimum contribution rates effective July 1, 2013 based on the collar, and calculates the net adjustment due to the collar and minimum independent employer contribution rate. The net adjustment due to the rate collar is applied to the pension UAL rate. The net adjustment due to the 6 percent minimum independent employer contribution rate is applied to the pension normal cost rate.

| | | |
|---|---|---|
| 1. | Current net Tier 1/Tier 2 pension contribution rate | 8.71% |
| 2. | Employer contribution rate attributable to side accounts | 0.00% |
| 3. | Current employer Tier 1/Tier 2 pension contribution rate *(1. – 2.)* | 8.71% |
| 4. | Size of rate collar | |
| | a. 20% of current employer contribution rate *(20% x 3.)* | 1.74% |
| | b. Preliminary size of rate collar *(maximum of 3% or a.)* | 3.00% |
| | c. Funded percentage | 93% |
| | d. Size of rate collar *(If c. < 70% or c. > 130%, 2 x b. If c. is 80%-120%, b. Otherwise, a graded rate between b. and 2 x b.)* | 3.00% |
| 5. | July 1, 2013 minimum employer contribution rate *(3. – 4.d. but not < 0%)* | 5.71% |
| 6. | July 1, 2013 maximum employer contribution rate *(3. + 4.d.)* | 11.71% |
| 7. | July 1, 2013 total pension rate, before adjustment | 13.48% |
| 8. | Net adjustment due to rate collar *(5. – 7., but not < 0, or 6. – 7., but not > 0)* | (1.77%) |
| 9. | July 1, 2013 Tier 1/Tier 2 UAL rate, before collar | 0.78% |
| 10. | July 1, 2013 Tier 1/Tier 2 UAL rate, after collar *(8. + 9.)* | (0.99%) |
| 11. | July 1, 2013 Tier 1/Tier 2 pension rate, after collar | 11.71% |
| 12. | Tier 1/Tier 2 retiree healthcare rate | 0.59% |
| 13. | Net adjustment due to 6% minimum *(6% - 11. - 12., minimum 0%)* | 0.00% |
| 14. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, before minimum adjustment | 12.57% |
| 15. | July 1, 2013 Tier 1/Tier 2 pension normal cost rate, after minimum adjustment *(13. + 14.)* | 12.57% |
| 16. | July 1, 2013 Tier 1/Tier 2 pension rate, after minimum adjustment *(11. + 13.)* | 11.71% |

# Tier 1/Tier 2 Valuation Results

## Contribution Rate Development

### *Tier 1/Tier 2 Employer Contribution Rate Summary (Post-Rate Collar)*

The table below summarizes the employer's pension contribution rate for Tier 1 /Tier 2 after adjustments for the rate collar and the 6 percent minimum employer contribution rate.

| | July 1, 2013 Rates calculated as of December 31, 2011 | Advisory July 1, 2013 Rates calculated as of December 31, 2010 |
|---|---|---|
| 1. Tier 1/Tier 2 pension contribution rates | | |
| a. Employer Tier 1/Tier 2 pension normal cost rate | 12.57% | 12.34% |
| b. Tier 1/Tier 2 UAL rate | (0.99%) | (0.75%) |
| c. Multnomah Fire District #10 rate | 0.13% | 0.12% |
| d. Total Tier 1/Tier 2 pension rate<br>*(a. + b. + c., minimum of 5.41%)* | 11.71% | 11.71% |

# Data

## Demographic Information

### *Employer Valuation Payroll*

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $853,140 | $1,408,914 | $2,262,054 |
| Tier 2 | 8,616,483 | 1,789,677 | 10,406,160 |
| Tier 1/Tier 2 valuation payroll | 9,469,623 | 3,198,591 | 12,668,214 |
| OPSRP valuation payroll | 7,060,127 | 1,967,050 | 9,027,177 |
| **Combined valuation payroll** | **$16,529,750** | **$5,165,641** | **$21,695,391** |

### *Employer Member Census*

| | December 31 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | | | | 2010 | | | |
| | Tier 1 | Tier 2 | OPSRP | Total | Tier 1 | Tier 2 | OPSRP | Total |
| **Active Members** [1] | | | | | | | | |
| General Service | 17 | 161 | 179 | 357 | 17 | 180 | 190 | 387 |
| Police & Fire | 17 | 27 | 34 | 78 | 26 | 27 | 32 | 85 |
| Total | 34 | 188 | 213 | 435 | 43 | 207 | 222 | 472 |
| **Active Members with previous service segments with the employer** | | | | | | | | |
| General Service | 22 | 54 | N/A | 76 | 22 | 60 | N/A | 82 |
| Police & Fire | 15 | 23 | N/A | 38 | 15 | 26 | N/A | 41 |
| Total | 37 | 77 | N/A | 114 | 37 | 86 | N/A | 123 |
| **Dormant Members** | | | | | | | | |
| General Service | 10 | 71 | 7 | 88 | 12 | 56 | 6 | 74 |
| Police & Fire | 14 | 7 | 2 | 23 | 10 | 11 | 2 | 23 |
| Total | 24 | 78 | 9 | 111 | 22 | 67 | 8 | 97 |
| **Retired Members and Beneficiaries** | | | | | | | | |
| General Service | 17 | 75 | 0 | 92 | 23 | 63 | 0 | 86 |
| Police & Fire | 51 | 5 | 0 | 56 | 47 | 3 | 0 | 50 |
| Total | 68 | 80 | 0 | 148 | 70 | 66 | 0 | 136 |
| **Grand Total Number of Members** | **163** | **423** | **222** | **808** | **172** | **426** | **230** | **828** |

[1] *Active counts do not include concurrent employees who have a separate dominant employer.*

# Data

## Demographic Information (continued)

### *Employer Tier 1/Tier 2 Active Members as of December 31, 2011*

| | Years of Service | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30-34** | **35-39** | **40+** | **Total** |
| **0-20** | | | | | | | | | | |
| **20-24** | | | | | | | | | | |
| **25-29** | | 2 | | | | | | | | **2** |
| **30-34** | | 5 | 3 | | | | | | | **8** |
| **35-39** | | 8 | 12 | 1 | | | | | | **21** |
| **40-44** | 1 | 4 | 28 | 9 | 1 | | | | | **43** |
| **45-49** | | 5 | 23 | 3 | 6 | | | | | **37** |
| **50-54** | | 3 | 26 | 1 | 2 | 3 | | | | **35** |
| **55-59** | | 3 | 38 | 1 | | | | | | **42** |
| **60-64** | | 1 | 20 | | 2 | 1 | | | | **24** |
| **65-69** | | 1 | 6 | | | | | | | **7** |
| **70-74** | | 1 | 2 | | | | | | | **3** |
| **75+** | | | | | | | | | | |
| **Total** | **1** | **33** | **158** | **15** | **11** | **4** | | | | **222** |

### *Distribution of Employer Tier 1/Tier 2 Members as of December 31, 2011*

**Dormant Members**

| Age | Count | Average Deferred Monthly Benefit |
|---|---|---|
| **0-20** | | |
| **20-24** | | |
| **25-29** | | |
| **30-34** | 6 | 183 |
| **35-39** | 9 | 919 |
| **40-44** | 11 | 458 |
| **45-49** | 10 | 1,296 |
| **50-54** | 21 | 324 |
| **55-59** | 29 | 551 |
| **60-64** | 11 | 870 |
| **65-69** | 5 | 431 |
| **70-74** | | |
| **75+** | | |
| **Total** | 102 | 607 |

**Retired Members and Beneficiaries**

| Age | Count | Average Monthly Benefit |
|---|---|---|
| **0-45** | | |
| **45-49** | 3 | 1,808 |
| **50-54** | 3 | 1,950 |
| **55-59** | 9 | 1,749 |
| **60-64** | 41 | 980 |
| **65-69** | 53 | 818 |
| **70-74** | 21 | 496 |
| **75-79** | 13 | 505 |
| **80-84** | 3 | 448 |
| **85-89** | 2 | 2,075 |
| **90-94** | | |
| **95-99** | | |
| **100+** | | |
| **Total** | 148 | 899 |

# Brief Summary of Methods and Assumptions

A detailed summary of the actuarial methods and assumptions used to prepare the December 31, 2011, valuation can be found in the system-wide report.

## Methods

A brief summary of the methods used in this valuation is shown below:

| | |
|---|---|
| *Actuarial cost method* | Projected Unit Credit. |
| *Tier 1/Tier 2 UAL and Retiree Healthcare UAL amortization* | The Tier 1/Tier 2 regular UAL and Retiree Healthcare regular UAL as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed period. For the Tier 1/Tier 2 UAL, this period is 20 years; for Retiree Healthcare, it is 10 years. Gains and losses between subsequent rate-setting valuations are amortized as a level percentage of combined valuation payroll over 20 years (10 for Retiree Healthcare) from the rate-setting valuation in which they are first recognized. |
| *OPSRP UAL Amortization* | Gains and losses between rate-setting valuations are amortized as a level percentage of combined valuation payroll over 16 years from the rate-setting valuation in which they are first recognized. |
| *Asset valuation method* | Market value of assets, excluding reserves. |
| *Contribution rate stabilization method (rate collar)* | Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) or independent employer are confined to a collar based on the rate pool's prior pension contribution rate (excluding side account rate offsets). The new contribution rate will not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the current rate. If the funded percentage excluding side accounts drops below 70% or increases above 130%, the size of the collar doubles. If the funding percentage excluding side accounts is between 70% and 80% or between 120% and 130%, the size of the rate collar is increased on a graded scale. |

## Economic Assumptions

A brief summary of the key economic assumptions used in this valuation is shown below:

| | |
|---|---|
| *Net investment return* | 8.00% compounded annually on system assets. |
| *Interest crediting* | 8.00% compounded annually on members' regular account balances.<br>8.25% compounded annually on members' variable account balances. |
| *Consumer price inflation* | 2.75% per year. |
| *Future general wage inflation* | 3.75% per year. |
| *Healthcare cost inflation* | Graded from 6.9% in 2012 to 4.5% in 2029. |
| *OPSRP Administrative Expenses* | $6.6 million added to OPSRP normal cost. |

# Brief Summary of Methods and Assumptions

## Changes Since Last Valuation

The key changes since the December 31, 2010 actuarial valuation are described briefly below and are described in additional detail in the system-wide report.

### *Changes in Actuarial Methods and Allocation Procedures*

There were no changes in actuarial methods and allocation procedures since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA actuarial methods and allocation procedures is provided as part of the system-wide valuation report.

### *Changes in Assumptions*

There were no changes in assumptions since the December 31, 2010, actuarial valuation. A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA assumptions is provided as part of the system-wide valuation report.

# Brief Summary of Changes in Plan Provisions

The following change in plan provisions occurred since the December 31, 2010, actuarial valuation:

- House Bill 2456, signed into law in August 2011, removed the HB 3349 “tax remedy” adjustment for members who retire after 2011 and are not residents of Oregon. The effects of this legislation were not reflected in this valuation. In our professional judgment, reflecting the effects of HB 2456 would not have materially affected system funded status as of December 31, 2011, or 2013-2015 employer contribution rates.

A complete summary of the Tier 1/Tier 2, OPSRP, RHIA, and RHIPA plan provisions valued is provided as part of the system-wide valuation report.

# Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called "funding method," a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded actuarial accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer's contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer's plan to determine the employer's periodic contribution rate and other information for the individual plan.

**Annual Required Contribution (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for both Tier 1/Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for other items such as side account rate offsets.

# Glossary

**Funded Status.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Net Pension Obligation (NPO).** The cumulative difference since the effective date of GASB 27 between annual pension cost and the employer's contributions to the plan, including the pension liability (asset) at transition, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to pension-related debt.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable or receivable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a state or local governmental employer's accounting for pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a state or local governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate the normal cost rate.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.

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