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TO: Cities, Counties, and Interested Parties

FROM: Steven Santos, Economic Development Planning Specialist, DLCD

SUBJECT: Goal 9 Guidebook

On behalf of the Department of Land Conservation and Development, I am pleased to announce that the first version of the Industrial & Other Employment Lands Analysis Guidebook is available on the DLCD web site.

The access the guidebook, go to: http://www.lcd.state.or.us/LCD/econdev.shtml and click on the link for the Industrial and Other Employment Lands Analysis Guidebook.

The guidebook is posted by section as a series of PDF files. It is intended for the user to download each section to print out and place in a three-ring binder. If you have difficulty downloading these files, please don't hesitate to contact me at the number or email below to arrange an alternative form of delivery.

The Guidebook is intended to be an ongoing resource and will be updated over time. Since this is the first version of the Guidebook, your feedback and comments are welcome and necessary to make improvements.

If you have any questions, comments, feedback, or need help accessing the guidebook, please don't hesitate to contact me at steven.santos@state.or.us or at 503-373-0050 x284.

Industrial and Other Employment Land Analysis Guidebook

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Background and Purpose

The Oregon Department of Land Conservation and Development (DLCD) created this guidebook to assist planners in identifying and analyzing the supply of land for industrial and other employment uses in their communities. These steps supplement the guidance provided by statewide planning Goal 9 and the Goal 9 administrative rule. The purpose of Goal 9 planning is to provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare and prosperity of Oregon's citizens.

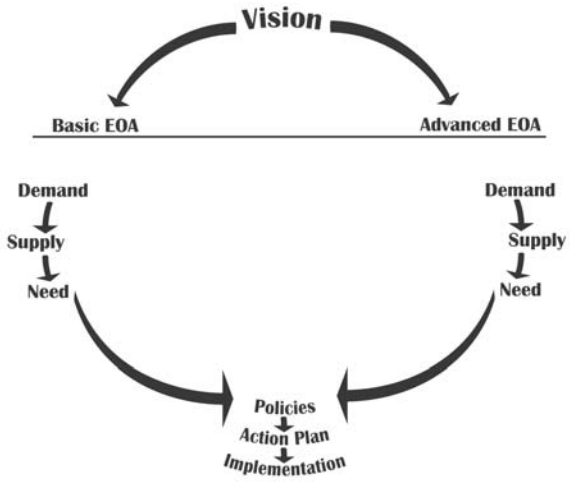
In 2001, an Advisory Committee on Commercial and Industrial Development was formed to "ensure that Oregon communities are providing sufficient buildable commercial and industrial land…." In December of 2002, the Committee produced *Sufficiency of Commercial and Industrial Land in Oregon: Recommendations for Oregon Communities.* The report, available at http://www.oregon.gov/icd/publications.shtml describes Basic and Advanced methods to evaluate and analyze industrial and other land needs. The 2003 Legislative Assembly directed the DLCD to develop this guidebook to implement the Advisory Committee's report. The framework consists of land needs for a 20-year planning period within urban growth boundaries (UGB). This analysis is one part of the comprehensive planning process conducted by cities and counties in Oregon. Table 1 indicates statewide planning goals most related to economic development inside UGBs.

Table 1
Oregon Statewide Planning Goals Most Related to Economic Development

Goal 1	Citizen Involvement
Goal 2	Land Use Planning
Goal 5	Open Spaces, Scenic and Historic Areas, and Natural Resources
Goal 7	Areas Subject to Natural Disasters and Hazards
Goal 9	Economic Development
Goal 10	Housing
Goal 11	Public Facilities and Services
Goal 12	Transportation
Goal 14	Urbanization

How to Use the Guidebook

The centerpiece of Goal 9 planning is the economic opportunities analysis (EOA) described in section two. The EOA is the process of analyzing trend data to determine the future employment land needs for the planning area. Users may follow just the Basic approach, utilize some of the methodologies from the Advanced section, or follow the Advanced section alone to comply with the Goal 9 rule. Guidance for Basic and Advanced approaches follow.



Basic Approach—appropriate for smaller jurisdictions with limited access to financial, technical or staff resources. The guidebook is centered around the Basic approach. Worksheets to help users complete the Economic Opportunities Analysis (EOA) portion of the Goal 9 process are included in appendix B.

Advanced Approach—appropriate for jurisdictions with staff capacity and/or resources to access detailed economic and Geographic Information Systems (GIS) data.

Both approaches contain step-by-step instructions on how to conduct the local economic development planning process. Data sources and other resources are listed at the end of each step. Summaries of major tasks are included at the end of each section, and margins are provided for notes. There are many ways a guidebook user can choose to complete the process. Users may combine elements of the Basic and Advanced approaches. They also may reverse the order of the demand and supply steps, or undertake them simultaneously.

The appendices include definitions of terms and acronyms used in the guidebook, sources for geographic information systems (GIS), demographic and economic data. Consult the DLCD Web site (www.oregon.gov/lcd/econdev.shtml) for additional information.

Overview of Economic Development

As reflected in Goal 9 and other policies of state and local governments, economic development is a priority in Oregon. Successful planning helps communities attract and retain jobs, maintain a healthy economy and generate wealth. It requires effective infrastructure placement, community involvement and coordination with other jurisdictions.

According to the Goal 9 administrative rule, local jurisdictions must adopt comprehensive plan policies to implement local economic development objectives. These policies and associated strategies should be revised and updated regularly, at least when land supply, economic, or demographic conditions change. An overview of the major economic development planning steps is followed by detailed explanations marked with a 
Data sources at the end of each task are marked with ✓

Step One: Create (or Refine) a Vision and Goals

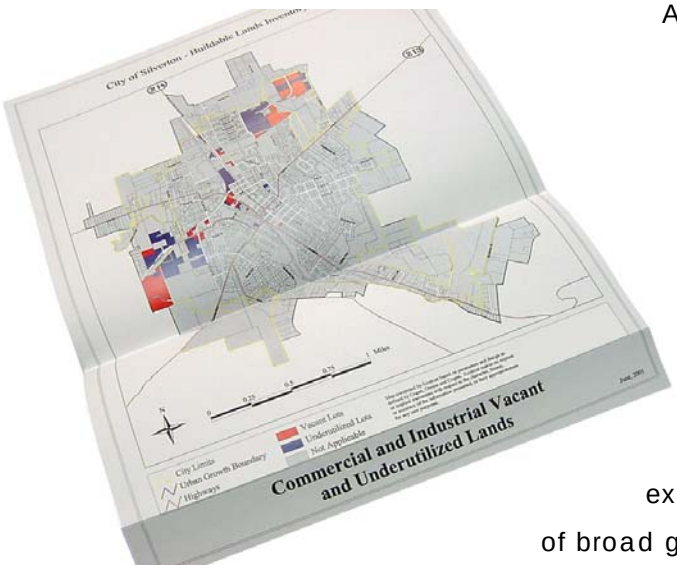
Public involvement is particularly important at the beginning and end of the economic development planning process. This process should result in strategies to stimulate and maintain job growth and identify primary locations for economic development. Many jurisdictions already have a community vision and/or an economic development strategy that can be the basis for this work.

The vision should be:

- A balance between what the jurisdiction would like to achieve and the resources and public support it can realistically expect
- A recognition of opportunities the market will support
- Consistent with the role of the jurisdiction in the regional and state economies
- Understandable to citizens without technical training or experience
- Easily incorporated into the jurisdiction's comprehensive plan
- Consistent with state law

"A clear vision and economic development strategies helped Hillsboro achieve economic growth and diversification in semiconductor, software, medical technology and many other sectors."

—David Lawrence
Hillsboro Deputy City Manager



As a first step, jurisdictions should review existing policies and plans to ascertain any conditions—demographic, economic or other—that may have changed since the original vision or policies were developed. Appendix D contains an example from the city of Hillsboro of broad goals can help guide economic development objectives and policies to assist with implementation.

Another example may be found at www.ci.corvallis.or.us. Click on "About Corvallis" then "2020 Vision Statement."

"Other Employment Uses" Encompasses all non-industrial jobs, including retail, wholesale, service, non profit, business headquarters, administrative and government activities that are accommodated in retail, office and combined building types. Also includes activities of an entity or organization that serves the medical, educational, social service, recreation and security needs of the community.

Step Two:

Conduct the Economic Opportunities Analysis (EOA)

Goal 9 requires cities and counties to provide an adequate supply of sites suitable sizes, types, locations, and service levels for a variety of industrial and other employment uses.

The EOA contains four elements: trend analysis, identifying site characteristics, land inventory and assessment of community economic development potential. Goal 9 administrative rule requirements may be found at: http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_009.html and http://www.lcd.state.or.us/LCD/docs/goals/goal9.pdf

An adequate land supply provides sites suitable for the 20-year planning period as well as for the short-term to meet development opportunities as they occur. This is necessary to accommodate a varied range of small, medium and large employers, for new and

expanding businesses and to ensure land is available for immediate development.

Land qualifies as short-term if it is ready for development within one year of a permit application or request for service extension. A 20-year land supply where 25 percent of the land is available short-term is considered competitive. This means there is a sufficient range of site sizes and locations to respond to economic development opportunities as they arise. Under the Goal 9 administrative rule, jurisdictions may participate in the industrial site certification program or set targets other than 25 percent for their short-term supply of land.

The objective of the EOA is to match expected **demand** for industrial and other employment lands with the **supply** and to provide a basis for local governments to accommodate identified **needs**.

- **Demand for land** is estimated from the analyses of national, state, regional, county or local economic trend data. For non-residential uses, business growth is the source of demand for industrial and other employment land. It usually is described by measures of business activity such as revenues, profit, imports/exports, output, and employment. Another part of the EOA on the demand side is to assess the community's local economic development potential. The demand analysis also should include an assessment of land by type, considering site requirements desired by industrial and other employment uses.

- **Supply of land** is determined from an inventory of existing developed, redevelopable and vacant industrial and other employment lands.

➲ Using the results of the demand and supply analysis, the next step is to calculate **land needs** for the 20-year planning period and the short-term.

Another important part of the economic opportunities analysis is to identify economic development issues that affect the vision and goals drafted earlier in the process. These include local and regional development strengths and weaknesses such as transportation, public and social infrastructure, workforce availability, business incentives and financial capability. The results of these two steps should be an economic opportunities analysis of market opportunities, local strengths and weaknesses and development objectives.

Step Three: Develop Policies

The purpose of policies is to implement local development objectives. For example, an objective of providing adequate land supply for industrial jobs may be reached by policies protecting those lands from encroachment or conversion to other uses, or requiring they be replaced if rezoned to other uses, or compromised by other factors.

Step Four: Develop an Action Plan

This should be based on the community vision and the previous steps. It should identify roles and responsibilities for all parties, an implementation schedule, estimated costs for infrastructure and potential funding sources.

Step Five: Implement Plan

This should begin as soon as practicable and continue throughout the planning period. The action plan and EOA should be monitored and revised as needed, particularly when conditions change.

Other Issues

Regional Coordination

Collaboration and coordination in a broad market area among cities, counties, ports and agencies can conserve resources and identify unique opportunities. Conducting an EOA for several jurisdictions at the same time may be less expensive than for individual jurisdictions and is allowed under the Goal 9 rule.

Industrial Land Preservation

Though some non-industrial activities such as restaurants and office supply companies may be important amenities for tenants in industrial zones, care should be taken that they not overtake the primary uses and compromise the jurisdiction's ability to meet its development objectives. Some industrial lands are irreplaceable as they are especially suited for certain industries because of their size, topography and access to transportation and freight facilities. Such areas should be protected by local policies. Techniques to protect prime industrial lands include:

Creating an industrial sanctuary through zoning is one way to preserve prime industrial land, or especially when adding new industrial lands to an urban growth boundary

- Special districts or overlay zones, such as industrial sanctuaries or strategic employment areas
- Limited retail or other non-industrial space within these special districts
- "No net loss" policies regarding industrial land. For example, a jurisdiction may have a policy that requires lost industrial acreage to be replaced elsewhere if some industrial employment land is rezoned to commercial retail or housing
- Large-lot parcel requirements to avoid incremental reductions, such as partitions
- Public ownership
- Financial incentives for private owners
- Reinvestment in existing industrial districts
- Flexibility that accommodates a range of industrial uses

Short-Term Supply of Land

Site and other development constraints affect the cost and timing of development. Short-term analyses address market opportunities within one to five-year planning period. These can help the jurisdiction target prospective industrial other employers who need an ample supply of land with features such as:

- Appropriate parcel size, slope and configuration
- Adequate infrastructure includes, roads, utilities and telecommunications
- Minor and/or easily ameliorated environmental issues, such as wetlands, floodplains and hazardous materials
- Willing sellers or owners
- Affordable price and overall development costs
- Workable land use regulations

Local economic development strategies and action plans should address steps a jurisdiction is willing to take to be competitive for targeted industrial and other employment activities in the short term.

Summary of Key Goal 9 Requirements

Economic Opportunities Analysis (OAR 660-009-0015)

Compares the demand for land for industrial and other employment uses with the existing supply of such land and includes:

- Review of national, state, regional, county, and local trends
- Identification of site characteristics
- Inventory of industrial and other employment lands
- Assessment of community economic development potential

Industrial and Other Employment Development Policies (OAR 660-009-0020)

Comprehensive plans must include:

- Community economic development objectives
- Commitment to provide a competitive short-term supply for jurisdictions within metropolitan planning organizations
- Commitment to provide adequate sites and facilities
- Detailed strategies for preparing the total lands supply for development and replacing the short-term supply as it is developed for jurisdictions within metropolitan planning organizations

In addition, cities and counties are encouraged to adopt plan policies relating to:

- Brownfield redevelopment and maintaining industrial lands in industrial use
- Expansion, retention and increased productivity from existing industries and firms
- Protection of prime industrial lands
- Additional approaches to achieving local objectives

Designation of Lands for Industrial and Other Employment Uses (OAR 660-009-0025)

Cities and counties must adopt measures adequate to implement policies, including:

- Identification of needed sites
- Total land supply
- Short-term supply of land
- Uses with special siting characteristics

Determining the Appropriate Approach to Economic Development

There are many factors to consider when choosing the most appropriate approach. Table 2 is a guide to help communities make this decision. As noted, Basic and Advanced methodologies can be mixed and matched based on a community's capacity and need for detailed analysis. Both benefit from the use of a Geographic Information System (GIS) to provide an accurate estimate of existing vacant or unconstrained land supply, sorted by zoning type, parcel size, ownership, location, proximity to public utilities, access, and other factors. If a GIS is unavailable, assessors' information may be used for the supply analysis.

Table 2

What level of analysis is best for your jurisdiction?

Criterion	Basic Method	Grey Area	Advanced Method
Population Size (000's)	<5	5-25	25+
Staff planning/economics expertise	None	Some	Staff planner or economist
GIS availability and capability	None	Some	Full GIS Capability
Schedule for decisions	Less than 12 months	12-18 months	More than 18 months
Economic development growth objectives and commitment of local policy-makers	Insignificant/Immeasurable	Small, but measurable	Significant
Budget	<$15k	$15-$30k	$30k +

Both Basic and Advanced methods begin with creating or refining a local vision for economic development.

Step One: Create (or Refine) a Vision and Goals

Vision statements and related goals are the foundation of any economic development strategy. Ultimately, each jurisdiction decides which type of public involvement process is best and allocates the appropriate resources. They may already have been developed by the jurisdiction, Chamber of Commerce or other economic development organization. The visioning process should involve contact with local businesspeople, decision-makers, the general public and other stakeholders. This may be through meetings, workshops, focus groups and household and/or business surveys. Citizen involvement plans that comply with statewide land use Goal 1 can provide guidance. Opportunities for public and stakeholder input increase the likelihood of support and reduce the risk of delay in implementation.

Objective:

Reflect the "ideal world" for the jurisdiction in terms of economic development by identifying the community's aspirations for future industrial and other employment development in the context of regional, state, national and international market realities. Astrengths, weaknesses, opportunities and threats (SWOT) analysis may be useful but is not required. General goals should be translated into specific objectives and actions after the Economic Opportunities Analysis is completed.

Data sources:

- ✓ Existing plans and strategies
- ✓ Stakeholder interviews
- ✓ Focus groups and surveys
- ✓ Meetings, workshops, work sessions, open houses

Product: Draft economic development vision statement, goals and objectives. These should be revisited at the end of the process and updated, if needed.

Worksheet task: None.

To Do:

- ✓ Identify and work with local stakeholders and the public to develop an economic development vision, general goals and objectives.

Step Two: Conduct the Economic Opportunities Analysis —Basic Approach

The Economic Opportunities Analysis (EOA) is defined in Oregon Administrative Rule (OAR) 660-009-0015. The Advanced approach follows the explanation of this Basic methodology. Worksheets that correlate to basic approach are included in Appendix B.

The Basic approach may be used by jurisdictions of any size to evaluate their current industrial and other employment land inventory and buildable land supply. It can rely mainly on existing data sources and does not require significant data collection, analysis or interpretation. It assumes that the jurisdiction does not have access to geographic information systems (GIS). This approach has three basic elements; estimate demand, identifying supply and determining the critical needs for industrial and other employment land. Though the demand and supply analysis may be conducted at the same time, and some jurisdictions may begin by conducting the supply analysis in this guidebook, the demand section is explained first.

Basic Approach—Demand

The purpose of the demand analysis is to identify industrial and other employment uses that can reasonably be expected to locate in an area. A review of national, state, regional county and local trends provides the context for local economic growth.

Demand Task Checklist.

- **Demand Task 1:** Analyze national, state, regional, county and local trends
- **Demand Task 2:** Forecast 20-year population & job growth by sector for a defined Market Region (MR)
- **Demand Task 3:** Assess community's economic development potential

Figure 1

Basic Steps
in the Demand Analysis

- **Demand Task 4:** Calculate local capture of regional job growth forecasts and number of jobs that require vacant land
- **Demand Task 5:** Estimate job density by sector (jobs per acre)
- **Demand Task 6A:** Forecast 20-year land need for job growth in UGB
- **Demand Task 6B:** Forecast 20-year land need for public facilities to accommodate job growth in UGB
- **Demand Task 6C:** Aggregate land demand forecast for jobs and public facilities in UGB
- **Demand Task 6D:** Estimate long-term land demand by parcel size
- **Demand Task 6E:** Calculate short-term (5-year) land demand for local UGB by parcel size

Demand Task 1A. Assess national, state, regional, county and local economic trends.

Regional information is available from the Oregon Employment Department that can help jurisdictions complete this task. Qualitative and quantitative local experience over the past years, including land use applications and business activities are other important sources of information. The regional trend information may be compared to information available locally or regionally. Factors to consider include:

- Population trends and characteristics (historic growth rates, age, race, etc).
- Income (per capita, household, and family)
- Employment (by industry and occupation)
- Public policies, taxes, and fiscal policy
- Recruiting efforts, prospects, marketing successes and failures

Table 3 summarizes the basic employment forecasting methods that rely on past trends as an indicator of future growth. The Basic analysis worksheets utilize the Ratio Trend method. The methodologies can be used alone or in combination. They rely on these assumptions:

- ➲ Past growth is a good indicator of future growth
- ➲ Factors affecting local economic growth will not change substantially
- ➲ Selection of the base year can affect the forecast significantly

Table 3
Employment Forecasting Methods

Method	Description
Ratio trend	Uses current city/county ratio of employment to predict the future.
Trend extrapolation	Uses historical employment growth rates to predict the future.
Population/employment ratio trend	Determines a ratio between population and employment.
Comparative	Compares growth with larger, older areas. Consider social, economic, political and other variables.

To calculate employment forecasts, the state will accept a basic trend extrapolation, calculated annually over a 20-year period.

Demand Task 1A Objective: Ascertain regional and local trends in population and employment.

Data sources:

- ✓ Oregon Employment Department (www.qualityinfo.org)
- ✓ U.S. Census (www.census.gov)
- ✓ Oregon Department of Administrative Services, Office of Economic Analysis (www.oea.das.state.or.us)
- ✓ Regional agencies, such as Metro and Councils of Governments:

  - Metro (www.metro-region.org)
  - Central Oregon Intergovernmental Council (www.coic.org)
  - Lane Council of Governments (www.lcog.org)
  - Mid-Columbia Council of Governments (www.mccog.com)
  - Mid-Willamette Valley Council of Governments (www.mwvcog.org)
  - Oregon Cascades West Council of Governments (www.ocwcog.org)
  - Rogue Valley Council of Governments (www.rvcog.org)
  - Umpqua Regional Council of Governments (www.ur-cog.cog.or.us)
- ✓ ES 202 data (www.emp.state.or.us) (1-800-237-3710)
- ✓ U.S. Bureau of Labor Statistics (http://www.bls.gov/)
- ✓ Local permit data
- ✓ Claritas (www.claritas.com) Claritas is a marketing information resources company with some free information on their Web site. There is a charge for most of their information.
- ✓ Chambers of Commerce
- ✓ Anecdotal evidence, discussions with business leaders, business activity, etc.

Product: Trends in population and employment

Demand Worksheet Task: Task 1A. Enter Oregon Employment Department or adjusted 1980-2000 trends and current estimates for population for the market region in lines 2-4 and employment in lines 9-11. Estimate local share. Alternately, enter numbers for the local area, county or UGB only.

Demand Task 1B. Develop 20-year employment forecasts.

Population forecasts based on trends and other factors for each of 15 geographic regions are included in the Web site of the Oregon Employment Department (OED) (www.qualityinfo.org). Go to publications link and click on employment projections by industry

in the data column of the web page. However, the OED accounts only for covered employment. Non-covered (home-based businesses and other sole proprietorships) are not included. Jurisdictions may adjust OED information accordingly.

Jurisdictions may wish to use an alternate methodology for arriving at their employment forecast. However, it is advisable to compare this with the OED projection for consistency and to confirm these estimates with elected and appointed officials, as well as with DLCD staff.

Demand Task 1B Objective: Provide a regional economic development context for the local EOA. The Oregon Employment Department provides a biannual update and ten-year forecast of job growth for major job sectors in 15 market regions. This forecast information includes the local jurisdiction as well as surrounding communities. These job growth forecasts can be adjusted to include additional workers that are not covered by the state forecasts, such as home-based occupations.

Data sources:

- ✓ Oregon Employment Department Quarterly projections (www.qualityinfo.org)
- ✓ State of Oregon Office of Economic Analysis (www.oea.das.state.or.us)
- ✓ U.S. Census (www.census.gov)
- ✓ Oregon Population Center at Portland State University (www.upa.pdx.edu/CPRC/about)

Product: Forecast of 20-year job growth by sector (industrial and other employment) for market region.

Demand Worksheet Task: Task 1B. Enter total current and projected population forecast in lines 5-7 and employment (job) forecast in lines 12-14. Disaggregate these projections for commercial, institutional and industrial jobs in lines 16-26.

Demand Task 2: Projected change in job growth by sector.

In this task, use worksheet rows 16-27 to help disagreggate the projected change in job growth by sector. Start with the base year then enter 10-year forecasts. In the third column, enter the change in job growth. In the fourth column, enter the annual rate of change (total forecast divided by 10). In the fourth column, use annual growth rate multiplied by 20 to calculate the 20-year forecast by sector. Subtotals in industrial, commercial/service jobs, and institutional/government employment may be entered in rows 20, 24, and 26. Enter an approximation of uncovered employment in row 26. Enter total in row 27.

Demand Task 2 Objective: Understand how the projected employment change is allocated among various sectors (construction & mining, manufacturing, etc…).

Data sources:

- ✓ Oregon Employment Department Quarterly projections (www.qualityinfo.org)
- ✓ U.S. Census (www.census.gov)
- ✓ Local experience, trends

Product: Sector specific change in job growth.

Demand Task 3. Assess community's economic development potential.

Evaluate the local factors that affect economic development, followed by the advantages, disadvantages, opportunities and constraints. This includes an estimate of the types and amounts of industrial and other development likely to occur in the planning area within 20 years. It should consider the area's economic advantages and disadvantages and likelihood of attracting new

or expanded development in general, as well as the specific types of industrial and commercial uses in the vision and goals. The Goal 9 rule (OAR 660-0015 (4)) suggestions considering the following:

- Location, size and buying power of markets
- Availability of transportation facilities for access and freight mobility
- Public facilities and public services
- Labor market factors
- Materials and energy supply, cost
- Necessary support services
- Limits on development due to federal and state environmental protection laws
- Educational and technical training programs
- Other factors

These also are called production factors—inputs that businesses use to produce goods and services. Jurisdictions that can supply these and others in relatively ample amounts of high quality and low cost may have comparative advantages.

Table 4
Sample Buildable Land Calculation

	Plan Designation		
	Commercial	**Light Industrial**	**Heavy Industrial**
Total acres	100	50	150
- Developed acres	75	15	60
= Vacant acres	25	35	90
- Constrained acres	4	6	12
= Unconstrained vacant acres	21	29	78
+ Redevelopable acres (optional)	3	0	10
= Total buildable acres	**24**	**29**	**88**
Density Assumption (employees per acre)	12 to 20	10 to 15	7 to 12
Estimated holding capacity (employees)	**288 to 480**	**290 to 435**	**616 to 1,056**

Table 4 is an example of a buildable lands calculation. Employment lands may include commercial and institutional uses such as hospitals, prisons, schools, and public

offices. Calculating redevelopable acres is optional for jurisdictions.

Conduct interviews with local and regional economic development practitioners such as representatives from the Oregon Economic and Community Development Department, neighboring jurisdictions, ports and other entities.

In addition to market factors, public policy can affect the supply, cost and quality of a community's economic development potential through:

Regulations. Though they are recognized as necessary to protect the health and safety of a community and help maintain the quality of life, many communities are considering how standards and procedures can be simplified to help keep and attract businesses. These include flexible zoning, streamlined permitting procedures and allowing home-based business operations.

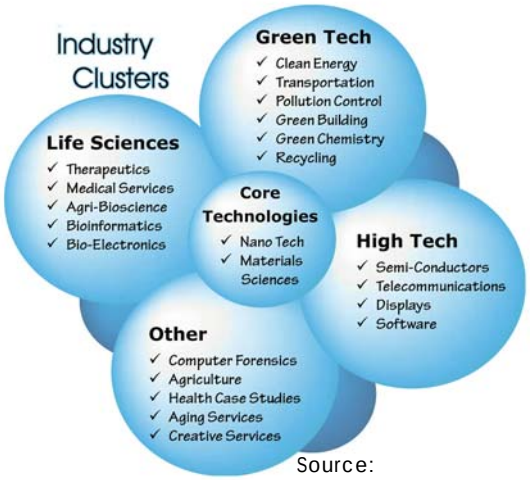
Taxes. This may be less important in decisions of local businesses than consideration of the costs of transportation, raw materials and capital. However, workers compensation and sales and property tax may affect some siting decisions of out of state businesses.

Financial incentives. These are more effective at redirecting growth within a region than they are at providing a competitive advantage between regions. Urban

renewal areas (URA's) or tax increment financing (TIF) districts can also be used to direct growth.

Industry clusters. Similar firms can realize operational savings and have access to a pool of skilled labor when locate close-by. Public policies can encourage such clustering.

Quality of life. An area's favorable weather, recreational opportunities, culture, low crime rate, good schools, clean environment and similar factors attract skilled and educated workers.



Source: Team Oregon, LLC

Innovative capacity. A culture that promotes innovation, creativity, flexibility and adaptability helps keep an area economically vital and competitive. Government can play a role in providing services and regulating development and business activities that are responsive to such needs.

Demand Task 3 Objective: Conduct a relative comparison of location, access, available public facilities, labor markets, materials/energy costs, and other factors (such as land availability) to help determine local job growth capture rates.

Data sources:

- ✓ Oregon Department of Employment Regional Economic Profile (www.emp.state.or.us)
- ✓ Bureau of Economic Analysis (http://www.bea.gov/)
- ✓ Oregon Labor Market Information System (http:// www.olmis.org)
- ✓ US Census (http://www.census.gov)
- ✓ Employment Security 202 data (Oregon Employment Department)
- ✓ Local transportation system / public facility plans
- ✓ Local education system
- ✓ Stakeholder interviews

Product: Evaluation of community economic development potential, including advantages, disadvantages opportunities and constraints. Focus on emerging trends, competitive strengths and weaknesses, home occupations and other relevant local market sectors that address a community's economic development potential.

Demand Worksheet Task: Task 3. Document local competitive market advantages and disadvantages, Enter scores in lines 29-37. Use this information to estimate the amount of regional employment the jurisdiction expects to "capture". This is referred to as the estimated capture rate.

Demand Task 4. Calculate local job growth.

Demand Task 4 Objectives: Utilize the results from Tasks 1 through 3 to estimate future capture rates and the resulting job growth within a market region. Task 4A results in a total 20-year job growth forecast. The objective of Task 4B is to allocate the total local job growth forecast between those that require vacant land and other that can locate on redeveloped or infill sites. While an estimate of the percentage of job growth that can be allocated to redevelopment is acceptable, a more thorough analysis of redevelopable sites is possible. This may be done by assuming parcels with an improvement value less than the land value are redevelopable.

Data sources:

- ✓ Interviews with regional economic development specialists, developers, business managers, bankers, real estate brokers.
- ✓ Assessors' information

Product: Percentage of market region's job growth that can be expected to be "captured" locally.

Demand Worksheet Tasks: Tasks 4A and 4B. Enter estimates in lines 40-43 and 46-49 of job forecasts by sector using an assumption of what share of the market region is anticipated to be "captured" in the local planning area.

Demand Task 5. Estimate job density.

There are several methods for estimating job density. The second method, *population/developed land ratio*, is the easiest to use, as most jurisdictions have current- year population estimates and forecasts. The third method, *employment/ developed land ratio*, is similar to the first, it relies on local employment estimates and forecasts. The first method, *employees per area*, requires assumptions. Employment density varies considerably by industry—and even within industries. Typical employment densities per net acre range from 8 - 12 jobs for industrial; 14 - 20 jobs for commercial; and 6 - 10 jobs for institutional/other jobs. Of importance is whether the assumption is for net acres (land that is available for sale in parcels, or lots after roads, environmental lands, and other infrastructure have already been deducted); or gross acres (total land before those deductions). As a general rule, it is assumed that there are more employees per acre on a net acre than on a gross acre.

A fourth method would be to consult with local developers, business leaders and others to estimate land need. Expert consultation may be used in conjunction with any of the other methods.

Table 5
Basic Methods for Estimating Land Demand

Method	Description
1. Employee per acre (EPA) ratio	Assumes a specific employment density, expressed in employees per acre. At the simplest level, the method uses an aggregate EPA ratio for all new employment. Requires both a current employment estimate and an employment forecast.
2. Population/developed land ratio	Uses the number of developed industrial and other employment acres per 1000 persons and extrapolates it to the planning horizon using the local population forecast.
3. Employment/developed land ratio	Uses the number of developed industrial and other employment acres per 1000 employees and extrapolates it to the planning horizon using the local population forecast. Requires both a current employment estimate and an employment forecast.
4. Expert consultation	Relies on the expertise of local developers, business leaders and others to estimate land needs.

Table 5 Summarizes basic methods for estimating land demand. The Basic analysis worksheet process utilizes the employee per acre (EPA) process.

A variation of the third method is to estimate the number of expected employees through assumptions or floor-to-area ratios (FAR) and square feet of built space per employee. For example, assumptions of 500 square feet of total (not usable or leasable) office space per employee and of an FAR of 0.3 (built space equals 30% of the buildable area) yields about 26 employees per net acre, or about 21 employees per gross acre. This method tends to yield greater densities than those typically assumed for employees per acre, perhaps because the FAR assumptions for a single lot are not easy to sustain over a larger area.

Demand Task 5 Objective: Select the job density, or jobs per net buildable acre; calculate local estimates for job density.

Data sources:

- ✓ Current population/employment estimates and forecasts
- ✓ Employee-per-acre assumptions

Product: Total jobs per acre for industrial and other employment estimated by sector.

Demand Worksheet Task: Task 5. Use the subtotals for industrial and other employment job density, or from lines 46, 47 and 48. Divide by a jobs-per-acre allowance and enter into lines 52-55.

Demand Task 6. Estimate land demand.

An estimate of local land demand can be completed in several steps numbered 6A-6E in the worksheet.

Demand Task 6 Objective: Identify land demand for industrial and other employment sectors.

Data sources:

- ✓ Current population/employment estimates and forecasts
- ✓ Employee-per-acre assumptions

Product: Accurate estimate of land demand.

Demand Worksheet Task: Task 6A-6E. Use information from Task 4 (lines 46-49) to multiply by employee per acre assumptions identified in Task 5 (lines 52-55). Subtract a 25% or other local appropriate allowance for public facilities. Identify a 20-year and 5-year demand forecast. Enter estimates in lines 70-74 for 20-year supply; lines 84-87 for 5-year supply.

"Special siting" needs include but need not be limited to large acreage sites, special site configurations, direct access to transportation facilities, sensitivity to adjacent land uses, or coastal shoreland sites designated as suited for water-dependent use under Goal 17. 

Basic Approach—Supply

The purpose of the land supply inventory is not only to document how much land is available for industrial and other employment uses, but also to help jurisdictions estimate "holding capacity." Holding capacity is the amount of employment that can be accommodated on an area of land. Consideration of specific site characteristics and preservation of prime industrial land also are important. Developable industrial and other employment land supply can be estimated by considering:

- ➲ Gross vacant acres, including fully-vacant and partially-vacant parcels
- ➲ Gross buildable vacant acres, subtracting unbuildable acres from total acres

- Net buildable acres, subtracting land that is unbuildable or needed for future public facilities from gross buildable vacant acres

The data needed to conduct such an analysis, using only local knowledge and fieldwork and not GIS, includes the following:

- Comprehensive plan and zoning maps
- County assessor parcel maps
- Aerial photos (if available)
- Field analysis

Supply Task Checklist.

- **Supply Task 1:** Estimate existing vacant industrial and other employment land supply in local UGB
- **Supply Task 2A:** Estimate local long-term (20-year) land constraints
- **Supply Task 2B**: Estimate local short-term (5-year) land constraints
- **Supply Task 2C**: Estimate local vacant land supply subtracting long-term land constraints
- **Supply Task 2D:** Estimate local vacant land supply subtracting short- and long-term land constraints

Supply Task 1. Determine existing vacant/partially vacant parcels on the plan map.

Supply Task 1 Objective: Estimate the total land area inside the UGB by zoning type and site sizes.

Data Sources:

- ✓ Comprehensive plan map
- ✓ Aerial photos
- ✓ Wetland maps

- ✓ Field verification
- ✓ Flood maps

This task can be labor-intensive. "Windshield surveys" are an effective way to estimate the redevelopment capacity of specific sites and may be color-coded on the county assessor's maps.

Product: Vacant industrial and other employment land supply totals, in acres.

Supply Worksheet Task: Task 1. Vacant land supply by size of site, number of tax lots and acres. Insert totals and subtotals for large (more than 10 acres), standard (1-10 acres) and small (less than one acre) industrial and other employment sites into supply worksheet lines 1-7. Characteristics (slope, environmental constraints and other factors) may be noted in this analysis.

Supply Task 2. Estimate development constraints.

There are three primary types of development constraints:

- ➲ Lack of urban services and infrastructure: streets that do not meet urban standards; high levels of traffic congestion; inadequate sewer, water, power or telecommunication systems.
- ➲ Environmental issues and land use regulations: natural geologic hazards, steep topography, wetlands, floodplains, riparian buffer setbacks, hazardous waste materials, and regulations that limit the type, location and extent of development allowed.
- ➲ Property ownership: land may be buildable and suitable for development but not readily available because of land-banking or speculation. These properties may be considered in the long-term rather than short-term land supply.

Supply Task 2 Objective: Estimate the net buildable short-term and long-term land supply after accounting for development constraints.

- Task 2A: focus on long-term development constraints, such as steep slopes, flood plains, wetlands, and public rights-of-way.
- Task 2B: consider short-term land constraints, such as ownership, elevation, availability of utilities and access.
- Tasks 2C and 2D: local net buildable land supply, accounting for long-term and short-term constraints.

Data Sources:

✓ Field observations and aerial photos

Product: Estimate long-term and short-term land constraints due to steep slopes, floodplains, wetlands, and public right of way for number of small, standard and large sites by tax lots and acres.

Supply Worksheet Tasks: Tasks 2A and 2B. Enter constraints as a portion of site acreage by type of use into lines 8-13 and 14-19.

Supply Worksheet Tasks: Tasks 2C and 2D. Subtract long- and short-term development (Tasks 2A and 2B) from gross vacant acres (Task 2A and 2C). Enter into lines 20-25 for net long-term supply and lines 26-31 for net short-term supply by type of use.

Basic Approach: Reconciling Demand and Supply (Determine Land Need)

The last step is to compare industrial and other employment land demand with supply to determine whether the jurisdiction has a short- (5-year) and long-term (20-year) supply of ready-to-develop land. This 20-year estimate has inherent limitations, as it is both highly aggregated and long-term. The Goal 9 rule places an emphasis on identifying sites that are ready to develop in the short-term (1-5 years).

Table 6 shows a sample comparison of demand and supply.

Table 6
Sample Comparison of Demand and Supply

Parcel Size*	Existing Total Vacant Land Supply	Net (Unconstrained) Land Supply	Projected Short-Term Parcel Demand (years 1 to 5)	Projected Long-Term Parcel Demand (years 6 to 20)	Additional Land Needs (parcels)	Comments
Less than 1 acre	12	2	0	0	0	Surplus of small (less than 1 acre) infill parcels
1 to 5 acres	6	1	1	3 to 4	3 to 4	Additional "ready to develop" sites needed
6 to 10 acres	0	0	1	1 to 2	2 to 3	Additional "ready to develop" sites needed
10 + acres	1	0	0	1	0	Little demand likely in this category. Incentives needed to spur development.
Total parcels	**19**	**3**	**2**	**5 to 7**	**5 to 7**	

Reconciliation Task Checklist.

- **Reconciliation Task 1A:** Carry over local 5-year net new land demand for UGB
- **Reconciliation Task 1B:** Carry over local 5-year land supply for UGB
- **Reconciliation Task 1C:** Forecast for 5-Year land surplus or deficit for local UGB
- **Reconciliation Task 2A:** Carry over local 20-year net new land demand for UGB
- **Reconciliation Task 2B:** Carry over local 20-year land supply for UGB
- **Reconciliation Task 2C:** Forecast for 20-year land surplus or deficit for local UGB

Reconciliation Task 1. Determine short-term buildable land needs.

Jurisdictions should consider how the short-term land needs relate to its vision, economic development objectives and market realities. Many can plan adequately for long-term land needs but have difficulty meeting short-term buildable land requirements. This can be attributed to constraints on vacant land such as lack of adequate sewer, water or road capacity or conflicting property owner objectives. Notwithstanding, a workable short-term strategy can provide important economic development opportunities.

Reconciliation Task 1 Objective: Estimate land requirements within the UGB that address short-term five-year job growth.

Data Sources:
Previous analysis

Product: Short-term (5-year) land needs and sites based on supply and demand analysis.

Reconciliation Worksheet Task: Task 1A, 1B, and 1C. Refer to information derived from Demand Task 6E and Supply Task 2D. Calculate using results from supply and demand worksheets.

Reconciliation Task 2: Determine 20-year land need.

Reconciliation Task 2 Objective: Estimate land requirements within the UGB that address estimated long-term 20-year job growth.

Data sources:

✓ Land demand and supply estimates

Product: Comparison of net 20-year demand and supply.

Reconciliation Worksheet Tasks: Tasks 2A, 2B, and 2C. Refer to Demand Task 6C and Supply Task 2C for relevant data.

This concludes the Basic analysis section. For users not interested in the more detailed methodologies of the Advanced section, proceed to Chapter 3: Develop Policies.

To Do:

- ✓ Identify short-term constraints to site development/project readiness.

Step Two: Conduct the Economic Opportunities Analysis—Advanced Approach

This chapter describes a level of analysis in addition to the Basic Approach that meets the requirements of Goal 9.

This Advanced approach requires more detailed data and analysis as well as geographic information systems (GIS). Primary research on employment densities, development trends and other factors included a 20-year demand forecast improve the forecast data.

Advanced Approach—Demand

This section describes how to calculate long-term (20 years) and short-term (1-5 years) needs, followed by steps to aggregate and disaggregate demand. For example, an aggregate forecast is an estimate of the total amount of industrial land needed in a jurisdiction during a 20-year planning period. A disaggregated forecast may start with the aggregated, long-term forecast as a baseline or control and divide it further by subarea, industrial sector, parcel size and time period, such as 1-5 years or 5-10 years. Table 7, continued on the next page, shows a sample disaggregation of employment demand.

Table 7
Sample Disaggregation

Employment Sectors (Non-farm payroll)	Projected Jobs* 2002-2022	Capture Rate	Industrial Jobs	Supportable Gross Fl. Area Req. (sf)**	Supportable Acreage (gross)***
Manufacturing	--	40%	--	--	--
Durable Goods	180	40%	72	72,000	24
Lumber & Wood Products	(60)	40%	(24)	(24,000)	--

Table 7 Sample Disaggregation					
Other Durable Goods	240	40%	96	96,000	31
Non-Durable Goods	(180)	40%	(72)	(72,000)	--
Food & Associated Products	(240)	40%	(96)	(96,000)	--
Other Non-Durable Goods	60	40%	24	24,000	8
Construction & Mining	(480)	--	--	--	--
Transportation & Utilities	(920)	40%	(368)	(368,000)	--
Wholesale Trade	360	40%	144	144,000	47
Government	840	20%	67	67,200	22
TOTAL	**5,390**		**(157)**	**(156,800)**	**132**

**Does not reflect jobs/land for schools.*
*** Assumes 1,000 gross square feet of floor area per employee.*
**** Assumes 30% of site devoted to public roads, utilities and open space.*

As noted previously, many variables can be considered to estimate the growth and kind of industrial and other employment activity that will require developable vacant land.

Long-Term Demand Analysis

Forecasted employment growth can be translated into demand after ascertaining the possible types of companies expected to expand or locate in the planning area and the employees per acre. The resulting estimate can be refined further by applying assumptions about re-use of vacant buildings, redevelopment of built sites and floor-to-area ratios in multi-story buildings. The resulting supportable acreage is the amount of building or land area likely to be needed or supported by the projected job growth.

The analysis of site requirements should consider size, shape, soil, transportation access, services and other characteristics.

This data can be entered into a spreadsheet with worksheets supporting each set of input and, if appropriate, alternative geographies (e.g., neighborhoods within a city, cities within a county, counties within a region). A recommended methodology follows:

Long-Term Demand Task Checklist.

- **Demand Task 1:** Establish baseline employment level and historic growth trends
- **Demand Task 2:** Forecast employment growth
- **Demand Task 3:** Group industries by type of land use
- **Demand Task 4:** Identify employment growth that does not require additional land
- **Demand Task 5:** Apply assumptions to convert employment growth to land demand
- **Demand Task 6:** Adjust net acres to total developable acres
- **Demand Task 7:** Adjust for vacancy rate
- **Demand Task 8:** Disaggregate the total demand

Demand Task 1. Establish baseline employment level and historic growth trends.

The Oregon Employment Department publishes employment data for the state and individual counties by sector and industry, showing the number of reporting units or establishments, monthly employment, average annual employment, quarterly payroll and annual payroll. As this information is derived from unemployment insurance data provided by individual firms, it includes only employees covered by the state's unemployment insurance program, or "covered employment." Generally, people not

included are the self-employed, seasonal agricultural workers and some railroad employees. To maintain confidentiality, information about employment sectors or industries with one or a few firms is combined.

Though employment data for cities is not published regularly, municipalities may request confidential data for planning purposes. This information reveals monthly employment and quarterly payroll for individual firms, along with the firm name, street address, state, zip code and industry code.

For research purposes and to establish historic employment trends, it is best to request data for the last five to ten years, as well as the current time period. A jurisdiction may also ask for information for its competitive market region-- a group of counties that provides area-wide land, goods, services and jobs. Converting this raw data to a format that establishes a baseline employment level describes historic employment trends and involves these steps:

Task 1.1. Sort data by geographic identifier, or "geocode" for individual firms.

After obtaining information about the "universe" of firms or establishments in a larger planning area and regional trends, informed decisions about local capture rates can be made that take into account the competitive advantages of the local area.

Correlate employment data to a physical location or subarea. If geocoding individual firms is too time-consuming and costly, the data can be approximated by sorting addresses by zip codes. They also should be divided by accepted industry classifications, such as SIC or NAICS.

Task 1.2. Develop summary data by industry.

Task 1A results in a data set that represents firms in the planning area by industry. Information about average annual employment, total payroll and the number of firms by industry can then be calculated. Useful trend indicators include employment and payroll growth, average firm size and payroll per employee.

Data for industries in which there are fewer than three firms, or in which one firm represents more than 80% of employment in that industry, are confidential. Jurisdictions may use this information for planning purposes but cannot otherwise make it public.

Task1.3. Adjust data to reflect total employment.

In light of the growing importance of self-employed workers and small home based employers, it is optional to determine total employment in the job forecast rather than "covered employment." The latter data from the Oregon Employment Department includes only employees covered by unemployment insurance. Data from the U.S. Bureau of Economic Analysis (BEA) on the total number of proprietors for covered employment by industry and by county also is available. Estimates of the ratio of covered to non-covered employment range from 5 – 15%.

Adjustments for agricultural workers and railroad employees are not necessary as they generate little if any demand for Industrial or commercial land.

Data sources:

- ✓ Oregon Employment Department ES 202 data (www.qualityinfo.org)
- ✓ Bureau of Economic Analysis employment by county (www.bea.doc.gov)
- ✓ Local employers, chambers of commerce
- ✓ Regional employment economists

Demand Task 2. Forecast employment growth.

The State of Oregon Office of Economic Analysis publishes long-term forecasts of total employment growth by county. As job forecasts are based generally on population ratios, cities need to consider their unique development issues, opportunities and constraints in developing their own employment forecasts. Forecasting the average annual growth rate expected for each industry should be based on economic trends and indicators for the planning area, such as:

- Historical growth rate of local industries
- Expansion plans of local firms and industries

Data about the following also is needed:

- Average annual growth rate for all industries, as indicated by the state's long-term forecast of employment growth by county
- Average annual growth rate for industries indicated in the Oregon Employment Department's 10-year forecast of employment by industry for Workforce Planning Areas
- National and state long-term employment trends by industry
- An Assessment of community economic development potential; This is required for Goal 9 analyses and should include consideration of the planning jurisdiction's location relative to markets, availability of transportation facilities, public services, labor market conditions, raw material, energy availability and other factors

Nearly every industry and firm has year-to-year fluctuations in employment. Jurisdictions should focus on long-term trends to determine their likely average annual growth rate.

These average annual growth rates (AAGR) can be applied to the baseline level of employment established in Task 1 to calculate the employment level and employment growth by industry.

Data sources:

- ✓ Oregon Employment Department ES 202 data and 10-year regional growth forecast by industry and occupation
- ✓ Bureau of Economic Analysis employment by county
- ✓ Local firms

Demand Task 3. Group industries by type of land use.

To forecast demand for non-residential land, employment growth by industry should be combined, based on their employment densities and development types. Table 8 shows three common land use types and their corresponding typical industries:

Table 8
Sample of Grouping Industries by Land Use Type

	Warehouse/Distribution	General Industrial	Tech/Flex
Construction and Mining		75%	25%
Manufacturing		75%	25%
TCU			
Trucking and Warehousing	100%		
Water Transportation	100%		
Air Transportation	100%		
Communications		50%	50%
Electricity, Gas, Sanitation		50%	50%
Wholesale	90%	10%	
Services			
Computer, Data Processing			100%
Auto Repair, Services, Parking		100%	
Miscellaneous Repair		75%	25%

Source: Hammer Siler George Associates

- ➲ Commercial: retail, administrative and professional activities such as finance, insurance, real estate, legal, accounting, information technology and medical services. May also include food service, recreation and tourism facilities.
- ➲ Industrial: manufacturing, assembly, fabrication, processing,

storage, logistics, warehousing, distribution, research and development, business headquarters.

- ➲ Institutional: public and private health care facilities, jails, schools and government facilities.

By grouping employment sectors into major categories, the sizes of buildings and land area required to accommodate future job growth can be determined.

Data sources:

- ✓ Local employment forecasts by industry
- ✓ Previous analysis

Demand Task 4. Identify employment growth that does not require additional land.

The next step is to identify employment growth that does not require additional land. Three types of employment growth will not need additional non-residential land:

Expansion by local firms. Anticipated employment growth of firms that own sufficient built space or land to accommodate expansion should be subtracted from the forecasted employment growth by land use type. They also should not be included in the inventory of buildable land, as it is not available to other firms. In many areas, this is a primary source of economic growth.

Growth that can be accommodated in vacant buildings and/or underutilized sites. As there is little empirical data on the share of employment growth that can be accommodated in vacant or redeveloped buildings, a general rule-of-thumb is 10% to 15%. An analysis of improvement-to-land-value ratio can help identify a better estimate of redevelopable land. This can also be validated by visual confirmation or "windshield surveys." It also should not be included in the inventory of buildable land.

Industrial and other employment jobs within residential or mixed-use zones. Planning areas that allow a mixture of employment and residential land uses, such as Mixed-Use Commercial and Mixed-Use Employment Districts tend to require medium- to high-density housing co-existing with retail, office and some light industrial uses. This may entail GIS-based analysis of employment sectors by standard industrial classifications (SIC) for a particular zone district (using ES202 data) or field research to verify the numbers of dwellings, types of employers and number of employees. Table 9 provides a sample mixed-use zoning analysis of jobs and dwellings.

Table 9
Sample Mixed-Use Zoning Analysis of Jobs and Dwellings

Mixed Use Zone Town Center – Jobs	Range (FAR/Acre)*	Assumed Range (FAR/Acre)*	Assumed Distribution of Land Use	Assumed Distribution of Acres (Net Buildable)	Estimated Floor Area (SF)	Assumed Floor Area SF Per Job	Estimated New Jobs
Retail Use	0.20-0.30	0.25	70%	17.1	186,000	550	338
Office Use	0.35-0.50	0.50	20%	4.9	106,000	350	304
Civic/Other Use	0.20-0.40	040	10%	2.4	42,000	750	56
Total	**--**	**--**	**100%**	**24.4**	**334,000**	**--**	**698**

Mixed-Use Zone Town Center – Dwellings	Estimated Floor Area (SF)**	Assumed Average SF/Dwelling	Estimated Dwelling Units
Retail Floor Area	186,000	--	--
Upper-Level Housing	61,380	950	65

** FAR = ratio of building floor area to total site land area.*
*** Retail floor area estimate derived from above calculation on retail use.*
Source: Otak, Inc.

A similar analysis can determine the extent to which there are residential/other uses in industrial and commercial zone districts. Generally, this has been found to be between zero and 25% of the land area. In mixed-use zones, an allocation between zero and 10% of total industrial and other employment jobs is standard. This should be deducted from the overall commercial/industrial job forecasts to determine the net demand for land.

Data sources:

- ✓ Interviews with local industries
- ✓ ES202 data analysis of job sectors by land use zone
- ✓ Information on home-based occupations
- ✓ Chambers of commerce
- ✓ Business directories

Demand Task 5. Apply assumptions to convert employment growth to land demand by land use type.

These two methods can be used to convert employment growth to land demand by land use type.

Option A. Employees per acre

The first option entails assumptions about employees per acre can be based on empirical or other measures of land demand. Typically, each acre can accommodate approximately 10 to 15 employees for general commercial and office-park industrial use, and about 20 for offices in non-metropolitan downtowns and suburban settings. High-rise office buildings in metropolitan downtowns are as dense as 100 employees per acre.

Jurisdictions can develop their own measures by matching confidential employment data for individual firms to parcel size by using assessment and taxation information. The resulting employees per acre can be averaged by industry or land use type, with the average applied to the employment forecast to

estimate land demand in acres. Some sampling to confirm the estimate, through interviews, assessment data on building footprints and field checks, is optional.

Measures of employees per acre vary widely, even among firms in the same industry. In all cases, these assumptions should reflect local conditions and expected trends.

Option B. Building square feet per employee and floor-area ratios (FAR's)

Applying assumptions of building square feet per employee (SFE) to the employment forecast results in an estimate of total building space needed to accommodate forecasted employment growth. This estimate can be translated to net acres of land by applying assumptions of building FARs. These assumptions can be based on similar studies elsewhere or local analyses.

For SFE, there is general consensus in empirical studies that a reasonable range for office use is between 300 and 500 square feet; retail can be the same or slightly higher. Industrial and warehousing may reach as high as 600 to 1,000. FARs average around 0.2 to 0.4 for suburban areas, varying by land use and building type.

To develop measures of SFE, a local jurisdiction should match confidential employment data for individual firms to building size available in assessment and taxation data. This information also can be used to calculate a FAR for each firm. The resulting measures can be averaged by industry or land use type.

As noted previously, both estimates can vary widely among firms in the same industry. The assumptions applied to the employment forecast should be adjusted to reflect local conditions and expected trends.

The employees-per-acre estimates should be about the same as the SFE/FAR calculations. Using the example above, office employment at 500 SFE and an FAR of 0.3 yields a density of about 21 employees per acre.

Data sources:

- ✓ General employment density studies
- ✓ Local employment density study

Demand Task 6. Adjust net acres to total developable acres.

Step 5 results in an estimate of demand in net acres. This does not include land area for streets, rights-of-way for powerlines or pipelines, wetlands, riparian space and similar uses. This can vary substantially and should reflect local conditions.

A net-to-gross factor can range from zero to 25% of total land area. Jurisdictions where streets and public facilities in non-residential areas are already developed need not make as large an adjustment to net acres, while those with large blocks of non-residential land that will need such infrastructure should use an adjustment of about 25%. This will increase net acres (total demand less employment growth that does not generate new land demand) to total developable acres of demand.

Data sources:

- ✓ Analysis of local non-residential net-to-gross ratio

Demand Task 7. Adjust for vacancy rate.

Real estate markets operate efficiently if there is more supply than immediate demand. With respect to land, most real estate economists accept an available supply two to five times greater than the immediate demand. A 20-year supply of land in an urban growth boundary should result in adequate choice in the short-

term. There are exceptions, such as, for example, if a few large parcels are held by a single owner who does not plan to sell them in the immediate future can impact available supply.

Vacancy rates also apply to built space. As they tend to be cyclical, the assumption should reflect a long-term average and provide a range of choices. For efficient market operation, a minimum vacancy rate for built space is between 5% and 15%. The estimate of total acres of demand should be increased by this percentage as the market often requires more options than the employment estimates seem to require.

Data sources:

- ✓ Interviews with local realtors

Demand Task 8. Disaggregate the total demand.

The total demand for industrial and other employment land uses that results at the end of Task 7 is for 20 years. Task 8 may be undertaken if further estimates of subcategories, such as heavy industrial/high-tech; short-term/long-term; geographical areas; or parcel size, are needed. Unless the total demand has been developed (steps 1-7) by adding up disaggregated demand estimates, these estimates should subdivide the aggregate (total) land need into components.

AS part of their Goal 9 analysis, cities and counties should identify the site requirements of firms that may expand or locate in the planning area. As an important component, parcel size can be determined by using the same employment and land use data as employed to estimate total land demand. An estimate of demand by parcel size can be compared to supply by parcel size to indicate any land deficiencies that should be addressed. A parcel may include more than one tax lot if they are contiguous and/or can be combined under one ownership.

The most direct way to estimate this total demand is to match employment data with parcel size from assessment and taxation information. The results should be manually reviewed for each firm, as some parcels may be larger than needed to support one firm and more than one employer may be located on the same parcel.

An alternate method is to infer parcel size from firm size (employees per firm). This can be ascertained directly from ES-202 employment data. The number of employees per firm can be converted to parcel size per firm, based on the employment density assumptions (employees per acre or building square feet per employee and FAR) for the estimated total land need described previously.

With either method, the resulting data on firm and parcel size should be summarized into a distribution of average parcel size by industries or land use types. For example, firms can be divided into groups of employees—1 to 5; 6 to 30; 31 to 100; etc. Within each group for each industry or land use type, the total number of acres of land (derived from geocoding employment data or estimating parcel size from employment density assumptions) can be divided by the number of companies in that size category to calculate the average parcel size.

Data sources:

- ✓ ES-202 data geocoded to parcels
- ✓ Random sample of developed parcels

Short-Term Demand Analysis

This analysis should be consistent with the data and results of the local economic strategy and the Basic land analysis methods, as discussed in the Basic approach. The results can be used to determine market conditions and short-term economic growth potential and demand. Market conditions can be categorized as follows:

- **Strong Market**—favorable regional and local economic growth pressure; few sites/buildings exist in market area; local economic objectives and strategy stress capitalizing on near-term development opportunities.
- **Mixed Market**—favorable regional and local growth pressure; local economic objectives and strategy support growth; existing or planned local supply of land/buildings appears adequate to meet short-term demand.
- **Weak Market**—low to moderate regional and local economic growth pressure; local economic objectives and strategy do not support significant growth; local supply of land/buildings appears adequate to meet short-term demand.

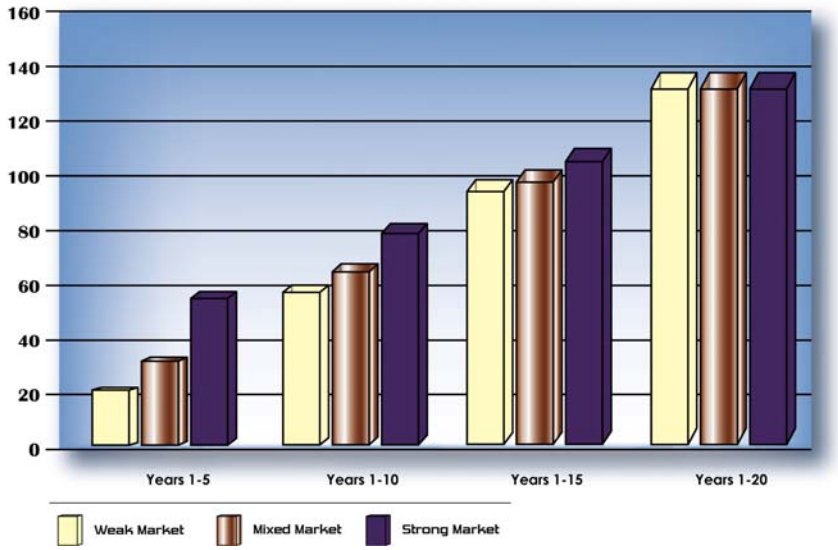
Following the assessment of 20-year growth potential, the jurisdiction can quantify industrial and other employment land demand over the short-term (1-5 years) by following these steps:

Short-Term Demand Task 1. Interpolate long-term parcel demand (from Task 8) into short-term demand.

Use long-term demand data from Task 8 to determine short-term demand by dividing the number of years by the total parcel demand. Adjust according to the jurisdiction's market scenario.

Figure 33 illustrates the three market scenarios. All assume the same long-term parcel demand, with varying levels of short-term demand that reflect local conditions.

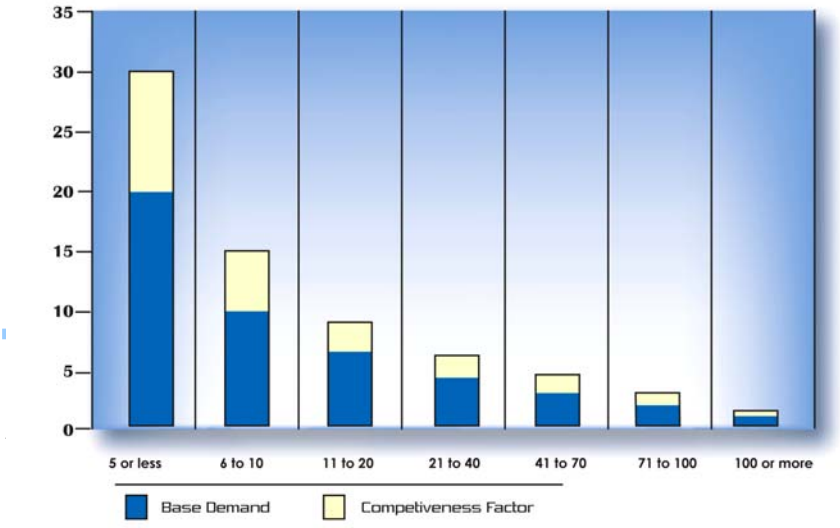
Figure 33
Cumulative Parcel Demand by Market Scenario



Short-Term Demand Task 2. Adjust short-term parcel demand upward to reflect a land market factor.

This reflects the need to provide a competitive inventory of sites to help meet employer preferences about parcel size, location and cost. Depending upon the local economic development strategy objectives, these factors can range from as much as 50% to 200% of baseline demand forecasts. Figure 34 illustrates the effect of a 50% competitive market factor on parcel demand.

Figure 34
Short-Term Land Needs in Parcels/Mixed Market Scenario



Short-Term Demand Task 3. Analyze supply constraints, adjusting short-term demand potential accordingly.

As noted, short-term supply constraints are important influences on short-term demand. An assessment of ownership and environmental and infrastructure needs should focus on potential sites that may accommodate the short-term demand. For example, if during step two it was determined that four sites of over 70 acres may be needed in the short-term, but the development constraints analysis reveals that only one site is actually available, the jurisdiction may decide to focus on other short-term opportunities such as supply of 5- to 20-acre sites.

Short-Term Demand Task 4. Identify policies to facilitate desired development.

A jurisdiction's ability to realize its short-term development potential can be augmented by supporting land use and funding policies such as:

- Flexible land use zoning ordinances that appeal to a variety of users
- Staff assistance to developers in the preparation of site master plans and/or environmental permits; engineering and architectural design drawings and specifications
- Proactive marketing and promotional efforts
- Requests for development proposals or expressions of interest from developers for specific sites
- Public funding or other financing that can provide needed infrastructure or be used to help leverage desired private investment
- Public assemblage of strategic parcels of land
- Commercial/industrial business parks or speculative buildings

Advanced Approach: Determining Supply

Long-Term Land Supply

The steps in this analysis build on the Basic Approach, introducing GIS and other data collection techniques. They will help a jurisdiction calculate:

- Gross vacant acres by plan designation, including fully vacant and partially vacant tax lots
- Gross buildable vacant acres by plan designation, subtracting unbuildable acres from total acres
- Net buildable acres by plan designation, subtracting land for future public facilities from gross buildable vacant acres
- Total net buildable acres by plan designation, adding redevelopable acres to net buildable acres

Supply Task Checklist.

- **Assemble databases.**
- **Categorize land.** Classify land into several mutually exclusive categories.
- **Identify development constraints.** Acknowledgment that not all vacant land is buildable and may be constrained by natural features, zoning, public facilities and other factors.
- **Calculate net buildable land.** Data may be organized by any of the attributes the jurisdiction wishes. GIS provides information that allows classification of each tax lot as either developed, partially developed, or vacant. Tax lots that are considered developed are re-assessed in a subsequent step to determine their redevelopment potential.

- **Verify analysis.** This generally includes review through aerial photos, orthophotos and field research to identify potential problems that cannot be ascertained by other means.
- **Analyze land by type.**

This Advanced Approach is aided by use of GIS data to develop a summary of land supply that can be cross-referenced. It relies on information such as land use and zoning, parcel boundaries and physical features that can be manipulated at the tax lot level.

There are many ways that "vacant land" and "buildable land" can be defined.

Tax lot boundaries often include developed and vacant land on the same parcel (e.g., one house on a three-acre lot). Thus, on individual tax lots, vacant land that is not constrained (buildable) may be either totally vacant with no significant improvements or partially vacant with some improvements. It also may be described as underutilized and redevelopable.

Redevelopable land is not vacant but can support some of the new demand identified previously. A common guide to determine whether a parcel is redevelopable is if the value of improvement on the land is less than the land value alone. This is also called have a land-to-improvement value ratio. If the ratio is greater than 1:1, the lot may be considered redevelopable. Another way to assess the likelihood of redevelopment is to compare the parcels' improvement value to surrounding parcels. If the improvement value is significantly lower than similarly designated surrounding parcels, it may be redevelopable.

Infill is not considered a type of vacant land development, but a condition of a tax lot relative it's to surroundings. If nearby tax lots

are primarily developed, an isolated buildable tax lot (totally or partially vacant) is considered an infill tax lot.

In summary, over the long term, two types of land can support new development: buildable vacant land and redevelopable land.

Supply Task 1. Assemble databases.

Obtain as much data about the land supply as possible. This should include:

- ArcView shape files showing parcel boundaries for all tax lots within the UGB, as well as any other relevant GIS data layers such as plan designations and physical features
- Records for all tax lots within the UGB in a digital format that can be imported into a corresponding spreadsheet or database applications
- Recent aerial photographs, preferably digital orthophotographs
- Maps of any significant natural resources or other constrained lands, preferably in ArcView format
- Copies of plan designation and zoning maps
- Assessor's index and quarter section maps for all areas within the UGB
- Comprehensive plan designations

It is not unusual for cities to have incomplete data when beginning a land supply inventory.

Data sources: Listed above

Supply Task 2. Classify tax lots.

The following describe land types:

Vacant. Land not currently containing permanent buildings or improvements.

Partially vacant or underutilized. Parcels with some development; vacant portions of parcels large enough to support development.

Constrained. Parts or entire parcels may be considered constrained or unable to support development. Typical constraints include:

- Wetlands
- Riparian areas and shorelines
- Steep slopes
- Geologic hazards
- Critical habitat areas
- Tsunami inundation zones
- Areas unserviceable over the 20-year planning period such as airport runways and expansion zones
- Floodplains and floodways

Constrained parcels or portions of parcels should be subtracted from total vacant land to obtain a buildable land estimate. This estimate should be further divided into totally vacant and partially vacant, based on parcel boundaries and existing development. Document this information in a format compatible with ArcView, such as a Microsoft Excel database or Access spreadsheet.

Redevelopable. Parcels with developed structures likely to be demolished. A portion of parcels that meet criteria for redevelopment potential should be assumed to redevelop during

the planning period. An estimate may also have been addressed during the demand analysis. If so, do not double count redevelopbale land in the supply section.

Developed. All land that is not vacant, partially vacant or redevelopable.

Data sources:

- ✓ Existing GIS parcel data
- ✓ Assessor's information
- ✓ Fieldwork

Supply Task 3. Identify development constraints.

Existing studies and reports, research, fieldwork and/or aerial photo interpretation are sources for this gathering information on development constraints. Additional information about types of constraints follows.

Wetlands

Jurisdictions with a current local wetlands inventory (LWI) should use that as a reference. If only a partial inventory is available, combine with other sources such as the National Wetland Inventory (NWI).

If there is no local wetland inventory, use NWI data as a base. If it seems to underestimate the amount of significant wetlands, undertake research, such as an analysis of soil types or field verification. Public review and comment on wetlands maps can be helpful particularly if a local LWI has not been completed. See also DSL Guide to Wetland Inventories (www.oregonstatelands.us/lwi.htm).

Floodplains

Most jurisdictions rely on a flood insurance rate map (FIRM) from the Federal Emergency Management Agency (FEMA) to identify floodplain boundaries. Federal and local regulations do not prohibit development in floodplains. Many allow development if it is elevated one foot above base flood level and proper local/federal permits are obtained. Jurisdictions that allow development that meets this standard should not deduct floodplains from their buildable land supply inventory.

Drainageways and Riparian Areas

Jurisdictions that have riparian setback ordinances should include any unbuildable areas in their constraint analyses. If the riparian areas are mapped, an overlay analysis with the GIS database is optimal. If they are not, review local ordinances and determine an appropriate method. Setbacks may be estimated by using a buffer tool in the GIS database.

Parks and Open Space

Public and private parks and open space areas should be considered unbuildable and excluded from the buildable lands inventory.

Hazardous Land: Slide Areas, Steep Slopes, and Earthquake Faults

These areas should be identified in the Goal 7, Natural Hazards element of the local comprehensive plan. With a contour layer, jurisdictions can use a digital elevation model to identify areas that could be constrained by slope. In the absence of local hazard ordinances, jurisdictions can remove all lands with more than 25% slope from the buildable lands base as an approximation. Industrial sites with more than 10% slope may be considered constrained.

Brownfields

These are properties where expansion or redevelopment may be hindered by actual or perceived environmental contamination (ORS 285A.185). Examples are former mill sites, gas stations, scrap yards and dry cleaners. Federal funding is available to assess and clean up brownfields and manage potential liability. After environmental and liability issues are mitigated, brownfields can be classified as vacant or redevelopable.

Service Constraints

These are most frequently due to lack of availability of water, or sewer or transportation to the site. Areas not scheduled for water, sewer or transportation service during the next 20 years can be identified by a review of local water, sewer and transportation master plans.

Institutional Uses

Governmental, public and non-profit facilities such as museums and schools are generally considered unavailable for development and zoned institutional rather than commercial or industrial. However, as they may be significant employers, they should be part of the employment analysis. Their long-range plans also should be considered.

Data sources:

- ✓ GIS parcel data
- ✓ Wetlands inventories
- ✓ FEMA FIRM maps
- ✓ Water and sewer master plans
- ✓ Park and school plans
- ✓ Local natural hazards inventory

Supply Task 4. Estimate total buildable land supply by land classification.

To ensure the accuracy of the conclusions before the final analysis is conducted, jurisdictions should verify buildable land data through aerial photos and field visits. Large jurisdictions may choose standard sampling techniques to test accuracy of the analysis.

Calculate gross buildable acres. Divide the estimated total buildable land supply into classifications. Begin by subtracting constrained acres from total vacant acres—preferably at the tax lot level. This analysis is most easily done by using GIS. It should result in a tabular database that can be summarized by various attributes, such as plan designation and zoning, and facilitates further disaggregated analysis that may be needed.

Jurisdictions have two options when addressing redevelopment potential: either deduct employment from the demand side of the calculation or include redevelopable land on the supply side. To avoid double-counting, only one approach should be used.

A supply-side analysis can help identify tax lots with redevelopment potential—those with developed structures with some probability of being demolished and replaced. Many studies use improvement-to-land-value ratios to estimate this.

Convert gross acres to net acres. A gross acre is a vacant acre of land before it has had a portion of the property dedicated for public rights-of-way, private streets, or public utility easements. For example, a standard assumption is that about 20% of land in a residential subdivision is used for streets and utilities: thus, a gross vacant acre will yield only about 35,000 sq. ft. (80% of a full acre) for lots. At five dwelling units per gross acre, the average lot size is about 7,000 square feet. A jurisdiction can calculate the precise percentage for reducing gross to net residential acres by

analyzing subdivision permits over the last five years. Environmental constraints described in Supply Task 3 cab reduce developable acreage even further.

One way to check assumptions is to randomly select developed industrial and other employment parcels and calculate the amount of land available for development that is used for streets, utility easements, and other public purposes.

Table 10 provides a sample calculation of converting gross to net acres.

Table 10
Sample Non-Residential Lands Data Worksheet

Tax Lot#	Total Acreage	*Minus* Developed acreage	*Equals* Gross vacant acreage	*Minus* Constrained acres	*Equals* Gross buildable vacant acres	*Minus* Acres for public facilities (25%)	*Equals* Net buildable vacant acres	*Plus* Redevelopable acres*	*Equals* Total net buildable acres
Commercial Plan Designation									
1202	10.0	0.0	10.0	1.1	8.9	2.2	6.7	-	6.7
1400	5.0	1.0	4.0	0.0	4.0	1.0	3.0	-	3.0
1506	8.0	8.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0
Subtotals							9.7	4.0	13.7
Industrial Plan Designation									
2000	20.0	0.0	20.0	2.0	18.0	4.5	13.5	-	13.5
4500	3.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0
Subtotals							13.5	3.0	16.5
Total Net Buildable Acres							23.2	7.0	30.2

Source: Adapted from the HB 2709 Workbook
[a] *Note: Rredevelopment may also be addressed on the demand side of the analysis*

Summarize buildable land by classification and plan designation. At a minimum, jurisdictions should develop buildable lands inventory maps and summary tables displaying this information. Zoning and land classifications may also be shown.

Data sources:

- ✓ GIS parcel data
- ✓ Assessors' information
- ✓ Field verification

Supply Task 5. Estimate employment holding capacity.

The final step in this analysis is to estimate how much employment can be accommodated on the buildable land, know as its "holding capacity." This requires density assumptions expressed in employees-per-acre multiplied by the estimate of total buildable acres.

The derivation of the employees-per-acre estimates also is described in this chapter under Demand Task 5. Generally, 14-20 employees per acre can be expected on commercial land; 8-12 employees per acre on industrial land and 6-10 on institutionally zoned land. Estimates aside, there is considerable variation, even within specific industries. In addition, any given industry can include many different occupations, each with a different employment density. It is always advisable to check the current employee-per-acre ratio as a comparison to the rule-of-thumb estimates.

Divide the number of employees forecast for each land use type by the employment density assumption (expressed in employees per acre) to estimate the number of acres needed for each land use type.

Data sources:

- ✓ General employment density information
- ✓ Local employment density data

Short-Term Land Supply

Jurisdictions may have a 20-year supply of industrial and other employment land and still not have many sites ready for development. This situation may occur if:

- ➲ Vacant, buildable, and serviceable sites are owned by a few property owners who are not ready to develop
- ➲ There are significant physical, institutional, or cost constraints before necessary public services (primarily roads, water, and sewer) can be supplied

Short-TermSupply Task 1. Identify short-term land supply.

In the buildable lands inventory, identify the number of sites and total acreage by land type ready for immediate development. The local public facilities plan should define the time schedule for providing services to developable sites.

Data sources:

- ✓ Local public facilities plans
- ✓ Interviews with public works director, utility districts
- ✓ Interviews with local landowners, developers and realtors

Advanced Approach—Comparing Land Demand and Supply (Need)

In the Basic approach, the result of the land demand analysis is compared to the total buildable land supply to determine whether the jurisdiction has a 20-year supply of buildable land. An analysis of short-term supply is also required.

Jurisdictions can begin a more detailed comparison of demand and supply by reviewing the site requirements of firms and conducting a detailed comparison of local sites. At a minimum,

this can occur at the plan designation level. More detailed analyses may be by building type (e.g., research and development, warehouse/distribution, general industrial, Class A office, retail, etc)., site requirements (size and other characteristics), or industry.

Reconciliation Task 1. Compare short-term demand and supply by firm need.

The supply analysis requires information about land by tax lot or parcel size and plan designation. This may then be compared to the identified site requirements of firms. For example, a jurisdiction that desires to attract a chip manufacturer but does not have any parcels larger than 20 acres cannot meet this need as such industries are likely to require sites of 50 to 100 acres.

This detailed comparison should include all the physical aspects including:

- Land use buffers
- Flat sites
- Parcel configuration and parking
- Soil type
- Building density
- Air transportation
- Fiber optics and telephone
- Potable water
- Power requirements
- Roadways
- Transit
- Pedestrian and bicycle facilities
- Air and water quality requirements

A final issue for consideration is the location of lands designated for industrial and other employment uses. For example, a review will be needed if all the buildable commercial lands are in one quadrant, a significant part of the buildable residential lands in another, and the jurisdiction has growth policies that encourage mixed-use development in both.

Data sources:

- ✓ Maps of buildable lands
- ✓ GIS database
- ✓ Development goals and policies
- ✓ Interviews with existing and potential employees

3 Step Three: Develop Policies

At a minimum, jurisdictions should develop policies in their comprehensive plans that address their targets for the type and location of industrial and other employment lands. These can help determine how, when and where public services will be provided. Many jurisdictions also adopt policies to preserve industrial and other employment lands. Appendix E provides an overview of potential economic development policies.

Data sources:

- ✓ Strategic plan
- ✓ Economic opportunities analysis
- ✓ Buildable lands inventory
- ✓ Community meetings and public hearings
- ✓ Stakeholder interviews, focus groups

To Do:

✓ Develop policies to achieve meet local development objectives.

Step Four: Develop Action Plan

The economic development plan should describe specific steps that will be taken to address the community's economic development vision, goals and objectives. It should be based on all the data collected so far and identify roles and responsibilities for all parties, including private and public partners; the time schedule for implementation; cost and funding sources. A possible framework for the action plan includes:

- Why the jurisdiction values this policy direction
- Purpose of the action
- Priorities
- Entities responsible for actions
- When the actions should occur. Possible increments may be immediate, or Year 1, short term, or Years 2-10 or longer term, 11-20 years
- Estimate time and resources for each step
- Definition of success, or targets
- Other partners

The action plan is the tool or roadmap toward attaining the overall vision. It acknowledges all the economic development objectives, opportunities analysis and land needs forecasts and constraints, and identifies the specific actions to create an adequate and competitive commercial, institutional and industrial land base for employment. The draft action plan should be reviewed by all the stakeholders described in task one, vision and goals.

Data sources:

- ✓ Economic development vision and goals
- ✓ Economic opportunities analysis

- ✓ Results of meetings with stakeholders and potential partners
- ✓ Research on funding sources

To Do:

✓ Develop the action plan.

5 Step Five: Adopt Policies and Implement Plan

Implementation is the mobilization or resources to implement the Goal 9 plan and associated economic development strategies. Implementation begins with public hearings and adoption of comprehensive plan policies and/or updates to public facilities plans. The action plan should guide public investment and staff resources, focusing on the most appropriate activities to achieve the desired job growth and other identified benefits.

The economic development strategy and action plan should be monitored and revisited on a regular basis or as land develops or economic or demographic conditions change. Regular updates can be used to ensure that plan implementation is on schedule and has sufficient resources. Quantitative and qualitative criteria can help to assess the achievement of project targets. Scheduled reviews also provide an opportunity to develop strategies to address new conditions.

Data sources:

- ✓ Goal 9, economic development plan
- ✓ Draft and final plan policies
- ✓ Building permits to track development as it occurs
- ✓ US Census, other demographic information

To Do:

✓ Implement and monitor plan progress.

Appendix A: Glossary

Absorption—The rate at which properties can be leased or sold in a given area.

Adequate Land Supply (Long-Term)—Commercial and industrial designated land within an urban growth boundary (UGB) that adequately accommodates employment needs up to 20 years as documented in the local Economic Opportunity Analysis. This entails a range of commercial and industrial-designated sites of various sizes and locations. Land deemed "adequate" also is considered "suitable", but not necessarily "available." (See definitions for those terms).

Adequate Land Supply (Short-Term)—Commercial and industrial-designated land within an urban growth boundary that adequately accommodates the short-term (1 to 5 years) employment needs documented in the local Economic Opportunity Analysis. This entails a range of commercial and industrial-designated sites in various sizes and locations. Land deemed as "adequate" also is considered "suitable" and "available", and should not be constrained by environmental, infrastructure nor ownership issues.

Available Land—Designated land for commercial or industrial uses that is suitable and offered for sale or lease by the property owner, or is available for future on-site expansion by existing tenants.

Buildable Lands—Lands in urban and urbanizable areas that are suitable, available and necessary for development. Include both vacant and developed land likely to be redeveloped.

Buffer—Strip of land that separates one type of land use from another with which it is incompatible.

Cluster—Geographic concentration of interconnected companies, specialized suppliers, service providers, firms in related industries and associated institutions that compete but also cooperate.

Commercial—A business, firm or organization that generates income by producing, handling or providing products or services for ultimate sale. Commercial uses include the entire retail (direct to consumer or business-to-business) sector; administrative and professional operations such as finance, insurance, real estate, legal, accounting, information technology and medical services; may also include food service, recreation services and tourism facilities.

Commission—The Land Conservation and Development Commission. Cities and counties may designate land in an industrial or other employment land category to compensate for any institutional land demand that is not designated under this section. Though cities and counties are not required to designate institutional uses needed for government facilities on privately owned land, the requirements of OAR 660-009-0025(2) still apply.

Competitive Short-Term Supply—Provides a range of site sizes and locations to accommodate the market needs of a variety of industrial and other employment uses, free from ownership constraints.

Competitive Market Region—A group of counties that provides a competitive market for land, goods, services and jobs.

Constrained Land—Vacant or partially vacant parcels with significant physical, environmental or infrastructure limits to development. Physical constraints include steep topography (sloped over 10% for industrial use and over 20% for commercial use), unstable soils and parcel configuration. Environmental constraints include on-site wetlands, floodplains or significant

riparian areas. Infrastructure constraints include inadequate public facilities (e.g., roads and utilities).

Conversion—The process and associated impacts of changing land from one use to another.

Covered Employment—Jobs covered by unemployment insurance; usually about 85% of total employment. People who are self-employed, farm workers, and some contractors are examples not covered by unemployment insurance, or "non-covered" employees.

Demand—The desire for commercial, institutional and industrial lands.

Department—The Department of Land Conservation and Development.

Developed Land—Parcels with relatively high-value improvements that are not vacant.

Development Constraints—Factors that limit or prevent the use of land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation or areas subject to natural hazards.

Economic Development Strategy—A planning document that describes economic development conditions, policies, growth objectives and implementation steps unique to the local jurisdiction. May be an element in a local comprehensive plan.

Elevation—The distance above sea level.

Employed—All civilians 16 years old and over who are paid employees, in their own business or profession, on their own farm, or work 15 hours or more unpaid on a family farm or in a family business.

Employees per Acre—A measure of employment density.

Employment Area—An area or sub area containing several local governments where employees are likely to commute from one jurisdiction to another. Employment areas are determined by the jurisdictions that wish to coordinate their planning efforts under OAR 660-009-0030.

Employment Land—Designated to accommodate a broad range of commercial and industrial uses.

Employment-Shed—Geographic area from which employees are drawn into the local or regional economy. An employment-shed may include all land within a jurisdiction's urban growth boundary; the jurisdiction's urban growth boundary plus surrounding unincorporated areas; two or more nearby jurisdictions and surrounding unincorporated land; or a larger regional area.

Floodplain—Area adjoining a stream that is subject to inundation by flood. Consists of:

- Floodway fringe: the area outside the floodway.
- Floodway: channel of a river or other watercourse and the adjacent land areas that must be reserved to discharge the base flood without cumulatively increasing the water surface elevation more than 2.5 inches.

Gross Vacant Acre—An acre of vacant land before it has been allotted for public right-of-way, private streets or public utility easements. A standard assumption is that between 20% and 30% of land in a subdivision is used for streets and utilities; thus, a gross

vacant acre will yield only about 35,000 sq. ft. (70%-80% of a full acre) for lots.

Industrial—Employment activities generating income from the production, handling or distribution of goods and related support activities. Industrial employment includes, but is not limited to, jobs in manufacturing, assembly, fabrication, processing, storage, logistics, warehousing, distribution, and research and development. Industrial uses have special land, infrastructure and transportation requirements and tend to cluster in traditional and new industrial areas segregated from other non-industrial activities.

Institutional—Relates to an entity or organization that provides a good or service that is not commercial or industrial in nature. Institutional uses include, but are not limited to, public and private health care facilities, jails and government facilities. Cities and counties are not required to designate institutional uses needed for government facilities on privately owned land. They may designate land in an industrial or other employment land category to compensate for any non-designated institutional land demand .

Irreplaceable—Property that has characteristics not found elsewhere.

Labor Force—All persons age 16 or over, plus members of the U.S. Armed Forces (on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).

Land Market Factor—Commercial and industrial land demand that accounts for the amount of land needed (in excess of baseline demand forecasts) to address use requirements for flexibility and competitiveness in the marketplace. Land market factors typically range from 0% to 200% of baseline demand, depending upon local economic policy objectives and local/regional economic development potential.

Land Need—Supply of lands needed to accommodate future employment demand.

Locational Factors—Include but are not limited to: proximity to raw materials, supplies, labor and services, markets or educational institutions; access to transportation facilities; and workforce (e.g., skill level, education, age distribution).

Long-Term—Planning period 20 years or more from the time the commercial and industrial buildable lands analysis is conducted.

Long-Term Supply of Land—Portion of the total land supply that is serviced or serviceable and suitable to replace the short-term supply as it is developed during the planning period.

Metropolitan Planning Organization (MPO)—Organization designated by the Governor to coordinate transportation planning on urban land in the state.

Net Vacant Acre—Vacant land after allotments for public right-of-way, private streets or utility easements. For example, a one-acre site that has 30% of land devoted to streets and utilities yields 0.7 acres for net development.

Net Vacant Land—Greater than one acre where the improvement value is less than land value.

Other Employment—All non-industrial jobs, including retail, wholesale, service, non profit, business headquarters, administrative and governmental activities that are accommodated in retail, office and combined building types. Also includes activities of an entity or organization that serves the medical, educational, social service, recreation and security needs of the community.

Ownership Constraints—Occur when ownership patterns or monopolies constrain the availability of the short-term supply of land.

Partially Vacant Constrained Land—Same as partially vacant, with limitations on development.

Partially Vacant Land—Parcels with some development; vacant portions large enough to develop.

Planning Area—The area within an urban growth boundary. Under state law, cities and counties with urban growth management agreements are required to address the urban land governed by their respective plans as specified in the urban growth management agreement for the affected area.

Prime Industrial Land—Land suited for targeted industrial uses. Traded-sector industries are businesses, firms or organizations that sell their goods or services in markets for which national or international competition exists, thus importing revenue into the local area. Prime industrial lands have characteristics that are difficult or impossible to replicate within the planning area; are at least 10 contiguous acres; contain few or no development constraints, and have ready access to the regional freight infrastructure. May include industrial brownfield sites.

Ready for Development— Land that can be developed within one year of a permit application or request for service extension.

Redevelopable Land—Occupied or partially occupied land that may or may not contain a low value of improvements relative to the value of the land.

Redevelopment Potential—Parcels with developed structures that are likely to be demolished; may include brownfield sites.

Safe Harbor—A standard procedure that complies with state or local law.

Serviceable—Public facilities, as defined by OAR chapter 660, division 011, that have adequate capacity for development where an industrial commercial site is located or can be upgraded to have adequate capacity. For a short-term supply of land, serviceable means public facilities either are currently available at the site or can be provided to the site within one year of an application for a building permit or request for service extension.

Short-Term—A planning period that is less than five years from the time the commercial and industrial buildable lands analysis is conducted.

Short-Term Supply of Land—Suitable land within the total land supply that is serviced or serviceable with the appropriate characteristics and ready for construction within one year of being chosen for development.

Significant Wetlands—Protected under federal law. Significant wetlands are not part of the buildable land inventory.

Site Characteristics—The attributes necessary for a particular industrial or other employment use. Characteristics may include: a minimum acreage or configuration including shape and topography; visibility; specific types or levels of public facilities and services; proximity to a particular transportation or freight facility such as an interstate highway, rail, marine port or airport.

Slope—For industrial land, should not exceed 10-15%; commercial land usually can be developed on slopes up to 20%.

Standard Industrial Classification (SIC)—Manual published by the federal Office of Management and Budget that provides a systematic classification of basic economic activities (industries).

Suitable—Land designated for industrial or other employment use that provides, or can be expected to provide, the appropriate characteristics for the proposed use or category of use.

Supply of Land—Existing developed, redevelopable and vacant commercial, institutional and industrial lands.

Total Land Supply—Supply for a 20-year planning period. Total land supply includes the short-term supply of vacant and redevelopable land for the industrial or other employment uses identified in the comprehensive plan.

Traded-Sector Industries—Businesses, firms or organizations that sell their goods or services in markets for which national or international competition exists.

Unemployed—All civilians 16 years old if they (1) were neither at work nor with a job but not at work, and (2) looking for work during the previous four weeks, and (3) were available to accept a job.

Urban Growth Boundary (UGB)—In Oregon, the designated area in which urban, as distinguished from rural, commercial, industrial, residential and other uses may occur.

Vacant Land—Land greater than one acre not currently containing permanent buildings or improvements.

Vacant Constrained Land—Same as vacant land, but with portions with significant wetlands, riparian areas and slopes greater than 10% for industrial and 20% for commercial land uses.

Appendix B

Basic Worksheet Method for Estimating Local Land Demand

	Objective	Description						Source/Notes
Task 1: A and B	**Analyze national, state, regional, county and local trends**	**Identify past trends in population and employment (at place of work) in the Market Region (MR) and affected jurisdictions**	**Market Region**	**Local Area County or UGB**	**Local Share of Market Region (%)**	**Units**		***Oregon Employment Dept., Dept. of Commerce, County Business Patterns, Regional governments***
		population						
		1980				people		U.S. Census
		1990				people		U.S. Census
		2000				people		U.S. Census
		base year				people		Portland State University
		2015				people		Oregon Office of Economic Analysis
		2025				people		Oregon Office of Economic Analysis
		employment (at place of work)						
		1980				jobs		Oregon Employment Department
		1990				jobs		Oregon Employment Department
		2000				jobs		Oregon Employment Department
		base year				jobs		Oregon Employment Department
		2015				jobs		Oregon Employment Department
		2025				jobs		
Task 2	**Forecast 20-year population & job growth by sector for a defined Market Region (MR)**	**Historic and projected job growth by sector (at place of work, covered employment) in Market Region**	**Step 1: Base year job count (specify year)**	**Step 2: Forecast 10-year job count (specify year)**	**Step 3: Forecasted change in jobs (step 2-step 1)**	**Step 4: Forecasted annual change in jobs (Step 3 divided by 10 years)**	**Step 5: Total 20-year job forecast for Market Region (Step 4 x 20 years)**	**Units**	***Oregon Employment Dept., Dept. of Commerce, County Business Patterns, Regional governments***
		Construction & Mining						jobs	Oregon Employment Department
		Manufacturing						jobs	Oregon Employment Department
		Transportation, Com. & Utilities						jobs	Oregon Employment Department
		Wholesale Trade						jobs	Oregon Employment Department
		Subtotal Industrial Jobs						jobs	Oregon Employment Department
		Retail Trade						jobs	Oregon Employment Department
		Finance, Insurance Real Estate (FIRE)							Oregon Employment Department
		Services						jobs	Oregon Employment Department
		Subtotal Commercial/Service Jobs						jobs	Oregon Employment Department
		Institutional/Government						jobs	Oregon Employment Department
		Other/Uncovered Employment (3-5% of jobs)						jobs	Oregon Employment Department
		Total Jobs						jobs	
Task 3	**Assess community's economic development potential**	**Document local UGB competitive market advantages and disadvantages**	**Market Region**	**UGB**					***Interviews with business and industry managers and economic practionners preferred***
		Location relative to markets			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Availability of key transportation facilities			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Key public facilities (water, sewer, etc.)			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Labor Market (cost and access)			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Materials and energy (availability and cost)			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Necessary support services			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Pollution control issues			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Education and technical training			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Other (such as land availability)			ordinal score				subjective score (1=poor, 2 = fair, 3=good, 4 = excellent)
		Total							
Task 4A	**Estimate total job growth in local jurisdiction based on capture rate within the Market Region**	**Historic and projected job growth by sector (at place of work, covered employment) in Market Region and Local Area (UGB)**	**Step 1: 20-year Job Forecast for Market Region (carry over from Task 2, Step 5)**		**Step 2: Enter local area job growth capture rate (%)**	**Step 3: Local jurisdiction 20-year job forecast (Step 1 x Step 2)**		**Units**	***Oregon Employment Dept., Dept. of Commerce, County Business Patterns, Regional governments***
		Industrial Sector						jobs	
		Commercial/Service Sector						jobs	
		Institutional/Government Sector						jobs	
		Other/Uncovered Employment						jobs	
		Total Jobs						jobs	
Task 4B	**Adjust local jurisdiction job growth for infill and redevelopment**	**Allocate the 20-year local jurisdiction job forecast to redevelopment of underutilized sites versus vacant sites**	**Step 1: Local jurisdiction 20-year job forecast (carry over from Task 4A)**		**Step 2: Forecasted allocation to redevelopment (%)**	**Step 3: Forecasted allocation to vacant sites (%)**	**Step 4: Projected 20-year jobs that require land (step 1 * step 3)**	**Units**	***Oregon Employment Dept., Dept. of Commerce, County Business Patterns, Regional governments***
		Industrial Sector						jobs	

Appendix B

Basic Worksheet Method for Estimating Local Land Demand

	Objective	Description						Source/Notes
		Commercial/Service Sector					jobs	
		Institutional/Government Sector					jobs	
		Other/Uncovered Employment					jobs	
		Total Jobs					jobs	
Task 5	**Estimate job density (jobs per acre)**	**Forecast average jobs per acre by net land area for employment sectors in UGB**						***Local interviews, Urban Land Institute, Portland Regional Industrial Land Study***
		Industrial Sector			jobs per acre			allowance (typically 8-12 jobs/ac)
		Commercial/Service Sector			jobs per acre			allowance (typically 14-20 jobs/ac)
		Institutional/Government Sector			jobs per acre			allowance (typically 6-10 jobs/ac)
		Other/Uncovered Employment			jobs per acre			allowance (typically 6-10 jobs/ac)
		Total/Average (optional)			jobs per acre			
Task 6A	**Forecast 20-year land needfor job growth in UGB (net acres)**	**Forecast 20-year land requirements by land use type (net acres) in UGB**						***Derived from Tasks 4 and 5***
		Industrial Sector			acres			Line 46 (Step 4) x Line 52
		Commercial/Service Sector			acres			Line 47 (Step 4) x Line 53
		Institutional/Government Sector			acres			Line 48 (Step 4) x Line 54
		Other/Uncovered Employment			acres			Line 49 (Step 4) x Line 55
		Total			acres			
Task 6B	**Forecast total 20-year land need for public facilities in UGB**	**Forecast 20-year land requirements for public facilities (based on 25% of net land area)**						***Derived from Task 6A***
		Industrial Sector			acres			Line 58 x 25%
		Commercial/Service Sector			acres			Line 59 x 25%
		Institutional/Government Sector			acres			Line 60 x 25%
		Other/Uncovered Employment			acres			Line 61 x 25%
		Total			acres			
Task 6C	**Aggregate total 20-year land demand forecast for jobs and public facilities in UGB**	**Forecast 20-year land requirements by land use type (gross buildable acres) in UGB**						***Derived from Task 6B***
		Industrial Sector			acres			Line 58 + Line 64
		Commercial/Service Sector			acres			Line 59 + Line 65
		Institutional/Government Sector			acres			Line 60 + Line 66
		Other/Uncovered Employment			acres			Line 61 + Line 67
		Total			acres			

			Total Sites		Large Sites		Standard Sites		Small Sites		
Task 6D	**Estimate long-term (20-year) land demand by parcel size**	**Allocate 20-year land requirements by land use type and parcel size (gross buildable acres and sites)***	**Tax Lots (optional)**	**Acres**	**Tax Lots (optional)**	**Acres**	**Tax Lots (optional)**	**Acres**	**Tax Lots (optional)**	**Acres**	***Derived from Tasks 6A and local estimates***
		Industrial Sector									
		Commercial/Service Sector									
		Institutional/Government Sector									
		Other/Uncovered Employment /Special Uses									allowance for special uses
		Total									

			Total Sites		Large Sites		Standard Sites		Small Sites		
Task 6E**	**Calculate short-term (5 year) land demand for local UGB by parcel size**	**Forecast 5-year land requirements by land use type and parcel size (gross buildable acres)****	**Tax Lots (optional)**	**Acres**	**Tax Lots (optional)**	**Acres**	**Tax Lots (optional)**	**Acres**	**Tax Lots (optional)**	**Acres**	***Derived from Task 6B***
		Industrial Sector									Line 77 divided by 3
		Commercial/Service Sector									Line 78 divided by 3
		Institutional/Government Sector									Line 79 divided by 3
		Other/Uncovered Employment									allowance for special uses
		Total									

** Note: Jurisdictions may vary definition of "large" , "standard" and "small" parcels depending on local economic development objectives. Typical "large parcels" are at least 10-100 acres in size, standard sites are typically between 1 and 5 acres, and small sites are less than 1 acre.*

***Note: It is recommended that the 20-year demand forecast be divided by 3 to allow for a slight market factor that provides a competitive land supply which allows market choice to account for varying tenant site requirements.*

Source: Otak, Inc.

Appendix C: Internet References

Web Site	Data Provided	Goal 9 Reference
www.oregon.gov	Governments: including city, county, council of government, state agency, or federal agency data often provide some GIS information that is periodically updated. The State of Oregon web site, www.oregon.gov, has connections to all cities, counties, and state agencies. Many states now have some kind of GIS data clearinghouse or links to data providers.	Supply and Demand
www.gis.state.or.us	Oregon Geospatial Data Clearinghouse maintains various state-wide GIS layers for download.	Supply
www.ous.edu	College or University Libraries; both University of Oregon and Oregon State University libraries have GIS collections.	Supply and Demand
www.terra.geo.orst.edu/ucgis	College or University Departments are now beginning to make available data that has been used or created in the course of their research. This web site is for Oregon State University Geographic Information Sciences. This web site describes GIS and GISci facilities, research, faculty and education at Oregon State University (OSU), Corvallis, Oregon. It is also OSU's online portfolio for membership in the UCGIS.	Supply
www-sul.stanford.edu/depts/gis/web.html	College or University web sites that present lists of various state and national GIS data sources. A good example is from Stanford University. Last updated October 13, 2004.	Supply and Demand
www.esri.com/data/index.html	Access to the right data is key to intelligent GIS analysis. ESRI offers a variety of data products to support your applications. ESRI also promotes and supports a strong group of partners who provide a wide range of data products in ESRI-compatible formats.	Supply and Deman d
www.seamless.usgs.gov/viewer.html	The United States Geological Survey (USGS) maintains the National Map that allows viewing and downloading of data.	Supply
www.nsdi.usgs.gov	The USGS maintains a National Geospatial Data Clearinghouse. This site provides one-meter aerial photography, digital elevation models, and various nation-wide date sets that can be used to identify land forms and topographic features.	Supply
www.fema.gov	The Federal Emergency Management Agency (FEMA). They provide floodplain and associated date that can be viewed at www.gis.msc.fema.gov/Website/DFIRM_Viewer/Viewer.htm.	Supply
www.terraserver.com	The Terra Server maintains a subscription service for aerial photography. There are also links to other aerial photography providers	Supply
www.wetlandsfws.er.usgs.gov/wtlnds/viewer.htm	National Wetlands Inventory (NWI) can be accessed through the Federal Fish and Wildlife Service web site. The data can be view or downloaded from the viewer. Data can also be downloaded at the following site: www.wetlandsfws.er.usgs.gov/download.html.	Supply
www.oregon.gov/ODOT	Oregon Department of Transportation (ODOT), roadway maps can be accessed at the web site and through the Maps and Library link in the column at the left.	Supply

Web Site	Data Provided	Goal 9 Reference
www.census.gov	US Census data can be found here. Downloadable GIS data can be found through the Geography links and the tabular data can be found through the United States Census 2000 link.	Demand
www.oregonprospector.com	The Oregon Prospector web site provides access to a State-wide industrial land and building inventory. While the inventory of sites is in the early stages of development, this web site provides key commercial and industrial land/building supply data for "permit ready" sites in cities and counties throughout Oregon.	Supply
www.econ.state.or.us	The Economic and Community Development Department provides economic and community development and cultural enhancement throughout the state, and administers programs that assist businesses, communities and people. Oregon's economic development system is designed to meet the state's changing economy, provide flexibility in funding statewide and regional needs, and focus on funding economic and community development services for rural and distressed communities. Through the internet, we hope to provide information to browsers from both Oregon and worldwide. We want to provide you with useful, updated information at a low cost.	Demand
olmis.emp.state.or.us/	The Oregon Labor Market Information System (OLMIS) provides economic information to employers, job seekers, students, policy makers, analysts and others. It is designed to give users access to the Employment Department's information resources free of limitations due to time or location. It is part of the agency's effort to allow people to make informed decisions based on the best data available.	Demand

Appendix D: Vision to Actions

Example provided courtesy of Hillsboro (http://www.hillsboro2020.org)

Vision

In the year 2020, Hillsboro is our home town. Within a rapidly changing metropolitan region and global economy, we live in a dynamic community that sustains our quality of life. Here, neighbors, generations and cultures connect. We live and work in balance with nature. Hillsboro is a safe and affordable community, a place our children and their children will be proud to call home.

Goals

Strengthening and Sustaining Community
Enhancing Neighborhoods and Districts
Preserving the Environment
Creating Economic Opportunity (detail shown below)
Expanding Educational and Cultural Horizons
Promoting Health and Safety

Objectives and Actions

Diverse Business Base

Foster Hillsboro's diverse base of businesses and industries.

- *Prepare and implement a new Hillsboro area economic development strategy, covering land supply, business retention, and recruitment*
- *Investigate ways to support and encourage emerging and multi-cultural businesses*
- *Encourage use of existing multi-cultural resources to expand hiring and training practices*

Family-Wage Jobs

Promote the creation of family-wage jobs.

- *Develop definition of "sustainable family-wage jobs"*
- *Prepare a profile of "family-wage" jobs in the community*
- *Establish a demographic and economic profile to help identify businesses with family-wage jobs*

Business Needs

Ensure zoning, development codes and land supply match the needs of all business types.

- *Revise zoning and development codes and permitting to recognize needs of all business types*
- *Maintain ongoing database of available land and leased space for all business types*

Long-Term Water Supply

Assure a long-term water supply for local business through sound water management practices.

- *Take a leadership role to ensure adequacy of regional water supply and delivery system*
- *Support capital improvement projects to maintain adequate water delivery and storage systems*
- *Develop and implement water conservation programs*

Transportation and Communications Improvements

Support transportation and communication system improvements to move goods, services, and information, and allow residents to reach destinations efficiently throughout the community.

- *Participate in the Hillsboro Airport master plan update*
- *Take leadership role in planning and financing of local and regional transportation systems*
- *Develop high-speed date network strategy city-wide*

Jobs-Education Coordination

Team educational institutions and business to better match education and training with jobs.

- *Develop an ongoing forum to synchronize business employment needs and trends with educational curriculum planning*
- *Enhance internship and apprenticeship programs for persons entering and re-entering the work force*

Appendix E: Potential Economic Development Policies

Category/Policy	Description
Land Use	**Policies regarding the amount and location of available land and allowed uses.**
Provide adequate supply of land to support employment growth	As per State requirements, provide an adequate supply of development sites to accommodate anticipated employment growth with the public and private services, sizes, zoning, and other characteristics needed by firms likely to locate in a particular city.
Cut red tape	Take actions to reduce costs and time for development permits. Adopt development codes and land use plans that are clear and concise.
Public Services	**Policies regarding the level and quality of public and private infrastructure and services.**
Provide adequate infrastructure to support employment growth	Provide adequate public services (i.e. roads, water, and sewer) and take action to assure adequate private utilities (i.e. electricity and communications) are provided to existing businesses and development sites.
Focused public investment	Provide public and private infrastructure to identified development sites.
Communications infrastructure	Actions to provide high-speed communication infrastructure, such as developing a local fiber optic network.
Business Assistance	**Policies to assist existing businesses and attract new businesses.**
Business retention	Targeted assistance to businesses facing difficulty or thinking of moving out of the community.
Recruitment and marketing	Establish a program to market the community as a location for business in general, and target relocating firms. Take steps to provide readily available development sites, an efficient permitting process, well-trained workforce, and perception of high quality of life.
Development districts (enterprise zones, redevelopment districts, etc.)	Establish districts with tax abatements, loans, subsidized infrastructure, reduced regulation, or other incentives available to businesses in the district that meet specified criteria.
Public/private partnerships	Make public land or facilities available, public lease commitment in proposed development, provide parking, and other support services.
Financial assistance	Tax abatement, waivers, loans, grants, and financing for firms meeting specified criteria.
Business incubators	Create low-cost space for use by new and expanding firms in Sweet Home with shared office services, access to equipment, and networking opportunities.
Mentoring and advice	Provide low-cost mentors and advice for local small businesses in the area of management, marketing, accounting, financing, and other business skills.
Export promotion	Assist businesses in identifying new products and export markets; represent local firms at trade shows and missions.
Workforce	**Policies to improve the quality of the workforce available to local firms.**
Job training	Create opportunities for training in general or implement training programs for specific jobs or specific population groups (i.e. dislocated workers).
Job access	Provide transit/shuttle service to bring workers to job sites.
Other	
Regional collaboration	Coordinate economic development efforts with the County and the State so that clear and consistent policies are developed.
Quality of life	Maintain and enhance quality of life through good schools, cultural programs, recreational opportunities, adequate health care facilities, affordable housing, and environmental amenities.

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