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# TILLAMOOK DISTRICT

## 2008 ANNUAL OPERATIONS PLAN

### INTRODUCTION

This annual operations plan (AOP) covers the State Forest Land managed by Tillamook District for Fiscal Year 2008 (FY08), which begins July 1, 2007 and ends June 30, 2008. This document describes how the activities and projects undertaken by the district will achieve the goals, strategies, and objectives of the NW Oregon Forest Management Plan (FMP), Tillamook State Forest Recreation Action Plan, Tillamook District Implementation Plan (IP), and portions of the (DRAFT) Western Oregon Habitat Conservation Plan (HCP). Refer to the district IP for more specific information on physical characteristics and other resource information on the district.

The summary document of the AOP is divided into five major categories: Integrated Forest Management, Planning and Information Systems, Public Information and Education, Administration, and Appendices. Appendix A contains summary tables for timber harvest operations-financial, timber harvest operations-forest structure, forest roads, young stand management, recreation management, and salmon anchor habitat (SAH). Appendix B is the bulk of the AOP and contains the Pre-Operations Reports and maps for individual harvest operations. A summary of the results of public involvement will be added to the final plan.

Note that the acres detailed throughout the report express net acres, unless otherwise stated. Net acres are based on orthophotos and GIS and exclude roads, non-required thinning areas, stream buffers (special stewardship in LMCS), other stream buffers and green tree retention areas.

In accordance with the guidance on the 2008 harvest levels<sup>1</sup>, the district has included 59.8 MMBF of timber harvest in this Annual Operations Plan (Table A-1). This harvest level is consistent with the district's intensive review<sup>2</sup> of the outputs from the Department's recently completed Harvest and Habitat Model Project.

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<sup>1</sup> Memo RE: State Forest Harvest Levels – fiscal years 2007 and 2008 dated December 20, 2006 from the State Forester

<sup>2</sup> Model Solution Review Report of the 'Forest Management Plan with Habitat Conservation Plan' Alternative

Additionally, the department is continuing its Implementation Plan Revision Process following the guidance provided by the State Forester<sup>3</sup>. Phase I of this process consisted of additional model runs that help inform the 08 harvest level. Phase II of the Implementation Plan Revision Process is examining: the implementation planning framework, and associated policies and procedures; alternative strategies for the management and protection of species of concern; and upgrades to the program’s model, including significant improvements to the forest inventory and yield tables. This phase is expected to be completed by the end of 2007.

At the end of Phase II, additional model runs will occur and districts will conduct an intensive review of the outputs from these model runs. The outcomes of this Implementation Plan Revision Process will help identify changes that may need to occur to the Implementation Plans. As previously noted from the Harvest and Habitat Model Project<sup>4</sup>, such changes are likely to include adjustment to the mixture of regeneration and partial cut harvests needed to meet Forest Management Plan goals and objectives.

The district has included 4 Alternate Operations in this Annual Operations Plan. These alternate operations may be used to replace regular sales that cannot be completed as planned.

The proposed timber sales will be designed, engineered, and submitted for processing during the FY08 time period. However, the actual on-the-ground operations may not occur during FY08 due to the time lag associated with contract duration, which could be one to three years after auction. In contrast, reforestation, young stand management, recreation management, and planning activities will be carried out during the FY08 time period.

Table 1. Annual Operations Plan objectives compared to annual objectives identified in the 2003 Tillamook District Implementation Plan (Table A-1). All values are acres.

Silvicultural Activity	IP Annual Objective		2008 AOP Objective <sup>1</sup>
	Low	High	
Conifer Partial Cut	1,000	3,000	2,475
Conifer Regeneration Harvest	2,000	5,100	2,022
Hardwood Partial Cut <sup>2</sup>	N/A	N/A	132
Hardwood Regeneration Harvest <sup>2</sup>	0	1,100	312
Rehabilitation	0	0	0
Reforestation (Initial Planting)	1,500	3,500	3315
Precommercial Thinning	0	500	400
Fertilization	0	0	0
Pruning	0	0	0

1. Acreages do not include alternate sales.
2. Hardwood stands designated as 1H in SLI.

<sup>3</sup> Memo RE: State Forest Implementation Plans dated June 5, 2006 from the State Forester

<sup>4</sup> Harvest & Habitat Model Project Final Report completed March 8, 2006 by the Oregon Department of Forestry

# INTEGRATED FOREST MANAGEMENT OPERATIONS

## Timber Harvest Operations

### **Overview of Timber Harvest Operations**

The planned timber harvest operations are within the total acres objective in the Tillamook District IP. Activities in the AOP will allow for stands to be moved toward complex structure and contribute to the overall objective of **59.4 MMbf**.

The IP harvest levels are based on total acres which range from 4,500 – 7,600 acres. Total planned acres in this AOP are 4,941. Harvest activities in this AOP are partial cutting (53%) and regeneration harvest (47%). Below are definitions of harvest types followed by more specific examples of the planned operations. Refer to [http://www.odf.state.or.us/DIVISIONS/management/state\\_forests/aop.asp#Definitions](http://www.odf.state.or.us/DIVISIONS/management/state_forests/aop.asp#Definitions) for complete description of the ranges of harvest types and terms.

Stand Level Inventory (SLI) data collection and structure classification using the program's algorithm has been recommended on all planned sales with a purposed regeneration harvest. An alternative to SLI has been proposed and accepted for planned regeneration harvests. The "Alternative to Full Stand Level Inventory" will screen stands by harvest prescription and available cruise data to determine if the stand is close enough to complex structure to warrant additional review or analysis. Only stands with a regeneration harvest prescriptions will need to be screened.

The Current Stand Structure has been identified in past AOPs by information from the SLI database. An algorithm was used to generate a structure from plot data gathered in the stand or by associating the stand with like stands. For this AOP the best inventory data available was used to identify the Current Stand Structure. SLI data was used if it was available. Many of the stands identified in the stand summary inventory as CSC were later calculated to be UDS by SLI.

An initial risk assessment of the timber sale area is completed by the Area geotechnical specialist. Any landslide deposits mapped and other structures found on the geology map (Wells, Ray E. , Parke D. Snavely, Jr, MacLeod, N.S., Kelly, Michael M. , Parker, Michael J. , Fenton, Johanna S. , and Felger, Tracey J. , 1995, Geologic map of the Tillamook Highlands, northwest Oregon Coast Range: A digital database: U.S. Geological Survey Open-File Report 95-670.) are identified and discussed in the Current Conditions and Slope Stability sections.

**Partial Cut Harvest (PC):** The intent of a partial cut harvest is to manage the growth and density of an existing stand. A prescription for a partial cut may be designed to increase the structural complexity of a stand, maximize volume growth, or capture tree mortality. A stand may be partial cut several times throughout its life. Partial cuts leave 80 or more square feet of basal area per acre on Sites Class I, II, or III. The partial cuts in this plan will reduce stand density to a SDI of 15 to 40.

Partial cutting operations are planned to move stands from CSC to UDS or to maintain complex structure components. These operations thin conifer to maintain vigorous tree growth, retain deeper crowns and allow light onto the forest floor to initiate understory vegetation establishment and growth.

**Regeneration Harvest:** Two types of regeneration harvest will be referred to in this AOP:

**Retention Cut (RC):** These operations leave 33 to 79 square feet of basal area/acre on Site Class I, II, or III. The residual trees can either be well distributed across the harvest unit or scattered and clumped creating a variable density distribution across the unit. Openings of ½ to 5 acres can occur in these units but are difficult to identify with current inventory data. These operations leave at least 15 trees and snags per acre with preference given to the biggest and best green trees in addition to the trees in riparian areas.

**Modified Clearcut (MC):** These operations leave less than 33 square feet of basal area on Site Class I, II, or III. Modified clearcut harvest will leave an average of 5 to 7 green trees per acre and an additional 3 to 8 trees or snags per acre to provide a future source for snags and down wood. The leave trees may be scattered across the unit (0-15 on any acre) or clumped (>15 on any acre). Areas of green tree retention are included in most of the modified clearcut harvest areas and are located along the riparian areas and/or on steep slopes above streams on the edge of a harvest unit.

Hardwood regeneration harvests are planned in closed single canopy stands (CSC) or understory stands (UDS) stands dominated by alder. These operations create predominately regeneration (REG) structure and remove hardwoods. Many hardwood stands were aerially sprayed in the 1970's resulting in short boles with multiple tops. Other hardwood stands not sprayed have slowed diameter and height growth due to stand age and will be harvested to allow for regeneration of multiple species conifer stands. A component of hardwoods will be retained in a variety of locations (on high landslide hazard locations, in riparian areas, and/or throughout the unit).

The IP emphasizes harvest operations to address the severe impacts of Swiss needle cast (SNC) on Douglas-fir in the district. Most of the conifer regeneration harvest operations are

focused on CSC or UDS stands with poor live crown ratios and slowed growth. Many of the stands are located in what is referred to as the SNC zone (approximately the coast to 15 miles inland), and have been impacted by SNC with low needle retention. Some may have been identified as having SNC symptoms during the annual aerial surveys,

In 2004 a report was written titled *Oregon Department of Forestry State Forests Program Swiss Needle Cast and Commercial Thinning, Review of recent research results and potential application to ODF Management, (5/17/05)*. The conclusions of this report are addressed through the AOP in the selection of timber sales included as well as prescription planned at this time. The prescriptions planned for SNC stands discussed in this plan are based on stand growth and the most recent information available to the district.

Regeneration harvest operations are also planned in conifer stands with poor live crown ratios and/or poor height to diameter ratios. Stands dominated by hemlock may be densely stocked and have tall trees with small live crowns and diameters causing the trees to be unstable and poor candidates for partial cutting. These stands may be harvested using a diameter limit prescription leaving the largest diameter trees scattered across the unit or in clumps. These types of stands are CSC or UDS and will create REG or UDS structure after harvest.

### **Landscape Design**

The landscape design is a long term vision of the desired future condition for the array of stand structures over the district landscape. To achieve the design a variety of silviculture prescriptions will be applied to a diverse area of stands types.

The District's vision for future development of complex and general stands on the landscape is shown on the IP display titled Desired Future Conditions (in the map section). The stands targeted for complex structure were identified as having the potential to move most quickly toward complex structure. Due to SNC, the homogenous nature of the age class structure across the landscape, hardwood stand conditions, and other factors stand designations are being re-assessed and will be formally modified with the IP revision which is scheduled to occur this year. In the interim the district will implement silvicultural treatments that are consistent with the mapped DFC, which take into account stand health and the ability of the present stand to achieve the DFC designation. If present DFC complex stands are targeted for a regeneration harvest their designation will be reviewed and possibly replaced with other stands during the IP revision.

### **Green Tree, Snag and Down Wood Strategies**

Structural habitat components such as snags and down wood will be considered for all harvest prescriptions. These structural components will vary from unit to unit. The intent of this AOP is to achieve the green tree retention targets outlined in the Forest Management Plan strategies and to either meet or provide future opportunity to achieve the snag and down wood landscape targets outlined in the FMP.

Green trees are retained in or adjacent to regeneration harvest units in a variety of ways. These trees (hardwood and conifer) may be clumped or scattered across the unit depending on species and/or size distribution (reserve trees specified in contract) or through residual basal area targets. Some green tree retention (GTR) areas are designated outside of harvest unit boundaries. These GTR areas may be located on high landslide hazard locations or other inoperable terrain. Mortality of some of these green trees is expected due to disease, wind, or snow damage. Overall, the goal of green tree retention is to have multiple species, in multiple arrangements to act as a source of future snags, down wood and large diameter trees in future stands.

The stands targeted for regeneration harvest in this AOP are generally 30 to 50 year old hardwood and/or SNC Douglas-fir that average approximately 13.0 inches. Due to the size of the trees in these stands it is unrealistic to expect that snag and down wood goals in the FMP will be met during this entry. Additional green trees will be left in order to grow and to provide opportunities to manage for large snags and down wood over time. The long-term goals may be obtained with natural mortality of green trees while other areas may be entered during pre-commercial or commercial operations to create snags and down wood. The Tillamook District has begun work on a draft policy, which will be completed in FY08, that provides direction and guidance for decadence management on the district. The document will include current strategies being used to meet the FMP requirements, rationale for these strategies, and ties to implementation monitoring that ensure that the FMP requirements are being met.

Snags will be retained on all sales (Regeneration Harvests and Partial Cuts) where they are not determined to be a safety hazard during the operations. If existing snags are cut, they are required to be left in the unit for down wood. There is an expectation that green tree retention will add to snag levels due to natural mortality. Snags will also be created in some harvest units by a variety of methods (topping lift trees, topping support trees, girdling guyline trees or by contract requirements). Additional snags are planned to be created in several sales in this sale plan. These sales include:

Beaver Power, Clear Hembre, Cougar Camp – Areas 1 and 2, Mid-Fork Alder, Phone Murphy – Areas 1 and 2, Point T Boot – Area 2, Power Bales – Areas 1 and 3, Rock n' Roy (outside of Areas 1 and 2), Runyon Ex, and Wakefield – Areas 1 and 2.

During sale layout and cruising a snag assessment will be completed in several sales to determine if additional snags need to be created during harvest. As a rule of thumb, stands with an average residual DBH greater than 15" may have snags created depending on cruise data.

Existing down wood on all sales will be retained and added to during harvest. On ground yarding areas trees are required to be topped, and tops left in the unit during yarding. Felled snags will be left as down wood and other trees determined during sale layout will be left in the unit. Similar to the strategy to create snags over time, green tree retention is expected to add down wood due to natural mortality. Additional down wood is planned to be created in several sales in this sale plan. These sales include:

Cougar Camp - Areas 1 and 2, Mid-Fork Alder, Rock N Roy (outside of the sale areas), Runyon Ex, and Wakefield – Areas 1 and 2.

SLI has not been completed for many stands in this AOP. During sale layout a down wood assessment will be completed in several sales to determine if additional down wood need to be created during harvest.

### **Aquatic Resource Protection Strategies**

In order to protect water quality during project work and active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods include (but are not limited to) maintaining culverts and other road drainage structures, using sediment control devices in road ditches when necessary, and monitoring logging and hauling operations. Culvert installment and replacement in live streams will be conducted between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

There are 11 sub-basins which have been designated as Salmon Anchor Habitat areas (SAH) within the Tillamook District. Six of the sub-basins had basin plans developed in June 2005 as part of the SAH strategy. These plans will be referenced when a sale is within a SAH basin with a developed plan. The total acres available to manage and the acreage managed in each SAH basin will be tracked in the Salmon Anchor Summary Table in Appendix A of this summary document.

ODF has opportunities to work with the watershed councils and the county public works department to improve water quality and fish passage through joint projects which may be funded by grants. The road and stream improvements are work which the district plans on doing whether or not partnered with the other agencies. By working with the watershed councils as a partner in these projects, the work ODF does on streams within the district can be used toward matching funds when done in conjunction with work on private or county land.

### **Stand Structure Development**

The process of producing an array of forest stand structures across the landscape is a gradual one. A variety of silvicultural practices will be used to actively move the forest towards the desired range of stand structures outlined in the IP (see Table 2 below). The Tillamook district will be operating on approximately 2.0% (acres) of the district with these planned harvest operations. The rate (acres/year) of partial cut harvest in this AOP is 1.1% and the rate of regeneration harvest is 0.9%.

All regeneration harvest operations will be reforested with mixed conifer species. A component of hardwoods will be reserved and will provide a seed source for the future stands. Reforestation decisions are based on the health of past stands, elevation, and aspect to create an appropriate species mix for the site.

Table 2. Stand Structure Development – This table summarizes how the Timber Harvest Operations in this AOP will contribute to achieving the district’s desired future condition. All values are in acres.

Stand Structure	REG	CSC	UDS	LYR	OFS	GEN <sup>1</sup>
Current	-	3683	1258	-	-	
Post Harvest <sup>2</sup>	1731	-	3210	-	-	
Desired Future				1421	1307	2213

1. General (GEN) is not a stand structure, but identifies those stands that are not targeted for Layered or Older Forest Structure in the district landscape design. These stands may develop into any of the five stand structures.

2. The Post Harvest stand structure (except for REG structure) is an estimate of how the stands will develop in five to ten years after the operations are completed.

**Acreages do not include alternative sales.**

The FY08 sale plan is estimated to generate gross revenues of approximately \$11,003,503 and net revenues of \$8,101,044. It is estimated that active management will result in producing approximately 44.4 million board feet of conifer volume, 15.4 million board feet of hardwood volume, for a total of 59.8 million board feet. Refer to the attached Financial Summary table and/or pre-operation reports for more detail.

**Summary of Operations by Basin**

In the following section, the commercial forest management operations planned for FY08 will be summarized in the context of the 11 management basins on the Tillamook District. ODF and ODFW resource specialists reviewed the FY08 operations plan and provided input. This section is a summary of the operations by basin and is not meant to completely describe the planned operation. Refer to Appendix B for more detail of each operation.

Table 3. Summary of Timber Harvest Operations in each basin. All values are in acres.

Basin	2008 AOP <sup>2</sup>		Cumulative Operations <sup>1,2</sup> (FY 02-08)	
	Partial Cut	Regeneration Harvest	Partial Cut	Regeneration Harvest
N. Fork Nehalem	0	0	911	260
Lower Nehalem	1490	645	6127	5265
Short Sands	0	0	0	0
Miami	0	0	820	901
Kilchis	56	172	449	784
Tillamook Bay	0	0	322	176
Wilson	352	765	1848	9313
Tillamook River	0	0	503	67
Trask	587	752	2080	8594
Nestucca	122	0	220	287
Little Nestucca	0	0	0	0

1. The Cumulative Operations include all Timber Harvest Operations under the current implementation plan period (July1, 2001 through June 30, 2011). The acres refer to planned acres and not harvested or accomplishment acres.

2. These totals do not include alternative sales.

### **North Fork Nehalem Basin**

There are no harvest operations planned in this basin for FY08.

### **Lower Nehalem Basin**

**Cougar Camp** – The sale consists of three areas encompassing 992 acres. The stands are approximately 60 years old. This is a naturally regenerated dense conifer stand with red alder in patches and scattered throughout the area. Portions of the area were pre-commercially thinned.

Area 1 is a planned for a partial cut by thinning the merchantable Douglas-fir, hemlock, and red alder to a basal area range of 140 ft<sup>2</sup> to 160 ft<sup>2</sup>. All other conifer and hardwoods will be reserved.

Areas 2 and 3 are planned as partial cuts where the merchantable alder will be removed and the conifer will be thinned. In Area 2 the Douglas-fir and hemlock will be thinned to 120 ft<sup>2</sup> to 140 ft<sup>2</sup>. In Area 3 the Douglas-fir will be thinned to 80 ft<sup>2</sup> to 100 ft<sup>2</sup>. All other conifer and hardwood species will be reserved.

Special Concerns: A goshawk nesting area is adjacent to the sale area. The district is working with the Area Biologist to create a site plan for managing in this area. The proposed harvest prescriptions have been selected to be compatible with the site plan. Seasonal

restrictions will be applied to project work and harvest activities adjacent to the nest site. See the individual Pre-operation Report for more information (Appendix B).

**Mid-Fork Alder**– The sale consists of two areas containing approximately 187 acres. The stands are approximately 55 years old and predominately red alder with pockets of dense conifer.

The planned prescription for both areas is a modified clearcut. The alder, Douglas-fir and hemlock, will be clearcut. A diameter limit will be used to leave the largest conifer trees, averaging 9 trees per acre, for green tree retention.

Middle Fork Cronin Creek has been identified as a potential candidate for in-stream LWD placement project.

Special Concerns: None

**Point T Boot** – The sale is composed of three areas totaling 383 acres and ranging in age from 40 to 45 years.

Area 1 is a mixed species stand containing large pockets of red alder and dense pockets of both Douglas-fir and hemlock. The stand has had no previous stand management. Area 2 is a dense Douglas-fir stand with pockets of hemlock and scattered red alder and noble fir. This area was pre-commercially thinned. Area 3 is a mixed species stand of Douglas-fir and red alder with pockets of dense hemlock. This stand has had no previous stand management.

Area 1 is planned as a retention cut. All the merchantable red alder will be harvested and diameter limits will be applied to the conifer to leave the larger Douglas-fir and to remove the hemlock with poor height-to-diameter ratios. The remaining conifer will be thinned to a basal area of 120 ft<sup>2</sup> to 140 ft<sup>2</sup>. All other conifer and hardwoods will be reserved.

Area 2 is planned as a partial cut. A diameter limit will be used to harvest the hemlock and Douglas-fir with poor live crown ratios. The merchantable alder will also be harvested. The remaining Douglas-fir and hemlock will be thinned to a basal area range of 120 ft<sup>2</sup> to 140 ft<sup>2</sup>. All other conifer and hardwoods will be reserved.

Area 3 is planned as a modified clearcut. All merchantable red alder will be harvested and a diameter limit will be applied to the conifer to leave the larger trees, averaging between 6 to 9 trees per acre. All other conifer and hardwoods will be reserved.

Special Concerns: The sale is in the Cook Creek sub-basin identified as a SAH basin. A T&E plant species is known to grow in an area adjacent to the sale at elevations above 3,000 feet. Seasonal restrictions may be applied to harvest activities if plants are found within the sale area. See the individual Pre-operation Report for more information (Appendix B).

**Rock n' Roy** - The sale consists of two areas totaling 228 acres, approximately 70 years old. These stands are of dense mixed conifer with large pockets of alder and areas of mixed alder and conifer.

Area 1 is planned as a retention cut and Area 2 is planned as a partial cut. The following prescription is planned for both sale areas. Because of the size and distribution of the conifer and alder the resulting harvest types are different.

The red alder will be harvested and a diameter limit will be used to remove the smaller Douglas-fir, hemlock, and Sitka spruce with poor height-to-diameter ratios. The remaining Douglas-fir and hemlock will be thinned to 120 ft<sup>2</sup> to 140 ft<sup>2</sup> of basal area. All hardwoods and other conifer species will be reserved.

Special Concerns: There is a registered water right downstream of Area 1. See the individual Pre-operations report for more information (Appendix B).

**Wakefield** - The sale is comprised of two areas totaling 345 acres and the stand is 60 years old. The sale areas consist of a naturally regenerated conifer stand, predominately Douglas-fir, with varying amounts of red alder. Area 1 is a conifer stand with stingers and pockets of alder. Area 2 is an alder stand with conifer in pockets and scattered across the area. The conifer stands and pockets are very dense and have had no prior stand management.

Area 1 is planned as a partial cut. The Douglas-fir, hemlock, and red alder will be thinned to a basal area of 140 ft<sup>2</sup> to 160 ft<sup>2</sup>. All other hardwoods and conifer species will be reserved.

Area 2 is planned as a retention cut. The red alder will be harvested and a diameter limit will be applied to the Douglas-fir, hemlock, and Sitka spruce leaving the largest trees. All other conifer and hardwood species will be reserved.

A tributary of Helloff Creek has been identified as a potential candidate for in-stream LWD placement project.

Special Concerns: A portion of the sale is located within a northern spotted owl circle. A Preliminary Biological Assessment has been drafted by the Area Biologist. See the individual Pre-operations report for more information (Appendix B).

### **Short Sands Basin**

There are no harvest operations planned in this basin for FY08.

### **Miami Basin**

There are no harvest operations planned in this basin for FY08.

## **Kilchis Basin**

**Sams Saddle** – This sale consists of three areas totaling 269 acres (228 acres within the Kilchis basin and 41 acres within the Wilson basin). The sale areas were planted after being burned in the 1933 Tillamook fire and the 1939 Saddle Mountain fire and are approximately 45 years old. The area is an overstocked Douglas-fir stand with slowed growth and poor live crown ratios. The stand also contains patches of red alder and scattered other conifer. The alder on portions of the sale were aerielly sprayed in the 1970s. Areas 2 and 3 contain a greater proportion of other conifer species than Area 1.

Areas 1 and 2 are planned as clearcuts; Area 1 is planned as a modified clearcut and Area 2 is planned as a retention cut. The merchantable Douglas-fir and red alder will be harvested and all other conifer and hardwood species will be reserved. This will retain approximately 7 to 9 trees per acre on Area 1 and 11 to 13 trees per acre on Area 2.

Area 3 is planned as a partial cut. Merchantable Douglas-fir and hemlock will be thinned to a basal area range of 120 ft<sup>2</sup> to 140 ft<sup>2</sup>. All merchantable red alder will be harvested. All other hardwood and conifer species will be reserved.

Special Concerns: The sale is within two Salmon Anchor Habitat (SAH) basins; 60 acres are within the Little North Fork Wilson sub-basin and 209 acres are within the Middle Kilchis sub-basin. See the individual Pre-operations report for more information (Appendix B).

**Beaver Power** - See Wilson Basin.

## **Tillamook Bay Basin**

There are no harvest operations planned in this basin for FY08.

## **Wilson Basin**

**Beaver Power** – This sale is 94 acres of which 80 acres are in the Wilson basin (14 acres in the Kilchis Basin). The sale is approximately 75 years old. The stand is predominately hemlock with a minor component of Sitka spruce, Douglas-fir, and scattered red alder. The stand is overstocked and has had no previous management.

The sale is planned as a thinning of the hemlock and spruce to 140 ft<sup>2</sup> to 160 ft<sup>2</sup> of basal area. Hardwoods and all other conifer will be reserved.

Special Concerns: The sale is adjacent to BPA transmission lines. Portions of the sale have a Visual classification of Level 1, high sensitivity. See the individual Pre-operations Report for more information (Appendix B).

**Between Wolves** - The sale consists of two area totaling 168 acres. The stand is approximately 43 years old and is predominately Douglas- fir with patches of red alder of

varying size. The Douglas-fir is overstocked resulting in poor live crown ratios and slowed diameter growth. The alder is mature and portions were aerially sprayed in the 1970s.

The sale is planned as a modified clearcut. The merchantable Douglas-fir and red alder will be clearcut. A diameter limit will be used to leave the largest Douglas-fir, averaging approximately 9 trees per acre. All other species will be reserved.

Special Concerns: There is an OHV trail within and adjacent to the sale areas. The sale areas are in the Cedar Creek Salmon Anchor Habitat basin. See the individual Pre-operations Report for more information (Appendix B).

**East Butte** – The sale is comprised of two areas totaling 195 acres. The stands on the sale area are approximately 52 years old. The stands are predominately Douglas-fir with pockets of red alder of varying size. The Douglas-fir is overstocked with poor live crown ratios.

Areas 1 and 2 are planned to be modified clearcuts. All merchantable red alder will be clearcut. A diameter limit will be used to leave a component of the largest Douglas-fir trees for green trees. All other conifer and hardwoods will be reserved.

Special Concern: Approximately 29 acres are in the Little North Fork Salmon Anchor Habitat basin. There are designated OHV trails within the sale. See the individual Pre-operations Report for more information (Appendix B).

**Lower Jones** – The sale contains two areas totaling 276 acres. Both sale areas are approximately 50 years old and predominately Douglas-fir. Portions of Area 1 were previously thinned in 1994. The remainder of the sale has had no previous stand management.

Area 1 is planned as a partial cut. The merchantable Douglas-fir will be thinned to 110 ft<sup>2</sup> to 130 ft<sup>2</sup> of basal area. All other conifer species and hardwoods will be reserved.

Area 2 is planned as a retention cut. The merchantable red alder will be harvested and the Douglas-fir will be thinned to 110 ft<sup>2</sup> to 130 ft<sup>2</sup> of basal area. All other species will be reserved.

Jones Creek has been identified as a potential candidate for in-stream LWD placement project.

Special Concerns: The sale is within the Cedar Creek sub-basin, which has been identified as a Salmon Anchor Habitat (SAH) basin. Portions of Area 1 and all of Area 2 have a Visual classification of Level 1, high sensitivity. The sale is also in close proximity to the Tillamook Forest Center. There are designated OHV trails within the sale areas. See the individual Pre-operations report for more information (Appendix B).

**Runyon Ex** – This sale consists of five areas totaling 343 acres and ranging in age from 45 to 50 years. The stands are in the Tillamook Burn and were planted with Douglas-fir between 1952 through 1961. There has been no prior stand management in these areas. The areas are predominately Douglas-fir with red alder in pockets and scattered throughout the sale areas. Areas 1, 2, 3, and 5 have many alder pockets of varying size. Area 4 is primarily a Douglas-fir stand with scattered alder. The Douglas-fir is overstocked and the alder in the eastern portion was aurally sprayed in the 1970s.

Areas 1, 2, 3, and 5 are planned as a retention cut. The merchantable red alder will be removed and a diameter limit will be applied to the Douglas-fir to remove smaller diameter trees with poor live crown ratios. The remaining Douglas-fir will be thinned to a basal area range of 120 ft<sup>2</sup> to 140 ft<sup>2</sup>. All other conifer and hardwood species will be reserved.

Area 4 is planned as a modified clearcut. Merchantable alder and Douglas will be harvested. A diameter limit will be used on the Douglas-fir to leave the largest trees. The retained green trees will average 7 to 8 trees per acre. All other hardwood and conifer species will be reserved.

Ben Smith Creek has been identified as a potential candidate for in-stream LWD placement project.

Special Concerns: The sale is within the Ben Smith sub-basin which has been identified as a Salmon Anchor Habitat (SAH) basin. A possible bald eagle nest site has been identified in the Runyon Creek drainage. A bald eagle site plan has been prepared which identifies a potential nest site area between Areas 1 and 2. Seasonal restrictions will be required on portions of the sale. Access to portions of the sale, across private property, need to be secured. Portions of the sale areas have a visual classification of Level 1, high sensitivity. There are BPA transmission lines adjacent to the sale area. The sale is also in close proximity to the Tillamook Forest Center. See the individual Pre-operations report for more information (Appendix B).

**Sams Saddle** – See Kilchis Basin.

**Marys Butte** (Alternate) – The sale consists of one area totaling 135 acres and the stands age is approximately 45 years. The sale is predominately Douglas-fir with red alder scattered throughout. The red alder was aurally sprayed in the 1970's. Portions of the sale were pre-commercially thinned.

The sale is planned as a partial cut. The merchantable Douglas-fir will be thinned to 110 ft<sup>2</sup> to 130 ft<sup>2</sup> of basal area. All other conifer species and hardwoods will be reserved.

Special Concerns: Approximately 95% of the net acres of the sale is within the Cedar Creek sub-basin, which has been identified as a Salmon Anchor Habitat (SAH) basin. The majority of Area 1 has a Visual classification of Level 1, high sensitivity. The sale is also in close

proximity to the Tillamook Forest Center and Jones Creek campground. There are designated OHV trails within and adjacent to the sale area. See the individual Pre-operations report for more information (Appendix B).

**Musical (Alternate)** -.The sale consists of two areas totaling 240 acres which average 51 years of age. The sale areas were burned in several of the Tillamook fires and were planted with Douglas-fir between 1955 and 1957. The stands are mixed species of Douglas-fir and red alder. The Douglas-fir has slowed in height and diameter growth and the alder was aerially sprayed in the 1970s. The areas have had no prior stand management.

Areas 1 and 2 are planned as modified clearcuts. All the merchantable red alder and Douglas-fir will be harvested. A diameter limit will be used to leave an average of 7 to 9 trees per acre. All other species of conifer and hardwoods will be reserved.

Special Concerns: Portions of the sale areas have a visual classification of Level 1, high sensitivity. See the individual Pre-operations report for more information (Appendix B).

### **Tillamook River Basin**

There are no harvest operations planned in this basin for FY08.

### **Trask Basin**

**Clear Hembre** - The sale is two areas totaling 556 acres and is approximately 42 years old. The sale areas are predominately Douglas-fir stands containing varying amounts of red alder and have had no previous stand management. The Douglas-fir has become overstocked and growth has slowed. In Area 1 the live crown ratios are poor but in Area 2 the live crown ratios on the dominant trees are good, about 40%.

Area 1 is planned as a modified clearcut. The Douglas-fir and merchantable alder will be harvested. All other conifer and hardwood species will be reserved. Leave trees will be left in clumps in headwalls and adjacent to buffers totaling approximately 6 to 9 trees per acres.

Area 2 is planned as a retention cut. The merchantable alder will be harvested. A diameter limit will remove the small diameter Douglas-fir trees with small crowns. The remaining Douglas-fir will be thinned to a basal area range of 100 ft<sup>2</sup> to 120 ft<sup>2</sup>. All other conifer and hardwood species will be reserved.

Special Concerns: A cultural resource, identified as Class I – Legally Mandated Protection, is within the sale area. See the individual Pre-operations report for more information (Appendix B).

**North Murphy** – The sale consists of two areas totaling 212 acres with stands between 40 and 45 years old. Area 1 is a red alder stand, which was aerially sprayed in the 1970s, and

contains scattered conifer. Area 2 is a Douglas-fir stand with pockets of alder and scattered alder and hemlock.

Area 1 is planned as a modified clearcut. The merchantable red alder, Douglas-fir and hemlock will be clearcut. A diameter limit will be used to reserve the larger conifer for green tree retention and future snag and down wood recruitment. All other species will be reserved.

Area 2 is planned as a partial cut. The merchantable alder will be removed and the Douglas-fir will be thinned to a basal area range of 100 ft<sup>2</sup> to 120 ft<sup>2</sup>. All other species will be reserved.

Special Concerns: None

**Phone Murphy** – The sale consists of two areas totaling 220 acres. The sale areas are 45 year old Douglas-fir stands with red alder and other conifer scattered throughout. Area 1 has had no previous stand management and Area 2 was previously thinned.

Both areas are planned as partial cuts. The Douglas-fir will be thinned in Area 1 to 110 ft<sup>2</sup> to 130 ft<sup>2</sup> of basal area and in Area 2 to 120 ft<sup>2</sup> to 140 ft<sup>2</sup> of basal area. All other species will be reserved.

A stream enhancement project is planned for Megan Creek, a Type F stream, which was identified in the Trask Watershed Analysis. The present culvert will be replaced with a bridge to allow fish passage and open up additional stream area to fish use. Elkhorn Creek (Area 1) has been identified as a potential candidate for in-stream LWD placement project.

Special Concerns: Most of Area 1 is within the Elkhorn sub-basin which has been identified as a Salmon Anchor Habitat (SAH) basin. There are designated OHV trails within and adjacent to the sale areas. A cultural site is adjacent to the south side of the sale and is classed as Level 1 – Legally Mandated Protection. See the individual Pre-operations report for more information (Appendix B).

**Power Bales** – The sale consists of three areas totaling 351 acres which are 41 years old. The stands are of seeded and planted Douglas-fir with red alder in pockets and scattered throughout the sale areas. The alder was aeriually sprayed in the 1970s. The Douglas-fir is overstocked and declining in growth. Portions of Areas 1 and 3 were pre-commercially thinned between 1986 and 1992.

Areas 1 and 3 are planned as partial cuts. The Douglas-fir will be thinned to a basal area range of 100 ft<sup>2</sup> to 120 ft<sup>2</sup>. All other conifer and hardwood species will be reserved.

Area 2 is predominately red alder and is planned as a modified clearcut. All the merchantable red alder will be harvested. A diameter limit will be used to harvest the

Douglas-fir, leaving the larger trees which will average 7 to 9 trees per acre. All other conifer and hardwoods will be reserved.

Special Concerns: Approximately 35 acres of Area 3 are within the East Fork of the South Fork Trask sub-basin, which has been identified as a Salmon Anchor Habitat (SAH) basin. There is a BPA transmission line crossing the sale between Areas 2 and 3. A recreational trail is within the sale area. See the individual Pre-operations report for more information (Appendix B).

**Seshong** (Alternate) – The sale is one area totaling 202 acres and averages 37 years of age. The sale area was burned in several of the Tillamook fires. It was aurally seeded in 1952 and 1960 and replanted with Douglas-fir in 1968. The Douglas-fir is now overstocked with poor live crown ratios. The stand has had no previous management.

The sale is planned as a modified clearcut. All the merchantable Douglas-fir and red alder will be harvested. A diameter limit will be used on the Douglas-fir to leave an average of 3 to 5 trees per acre. Additional green trees will be left in a buffer which will follow a riparian area and break the sale into two sections, each less than 120 acres in size. All other hardwood and conifer species will be reserved.

Special Concerns: Approximately 3 acres are within the East Fork of the South Fork Trask sub-basin, which has been identified as a Salmon Anchor Habitat (SAH) basin. There is a designated OHV trail within the sale area. See the individual Pre-operations report for more information (Appendix B).

**Southern Gold** (Alternate) -. The sale is one area totaling 185 acres and averages 43 years of age. The sale area was burned in several of the Tillamook fires. It was aurally seeded in 1952 and 1960 and replanted with Douglas-fir in 1968. The Douglas-fir is now overstocked with poor live crown ratios. The stand has had no previous management.

The sale is planned as a modified clearcut. All the merchantable Douglas-fir and red alder will be harvested. A diameter limit will be used on the Douglas-fir to leave an average of 9 trees per acre. Some of green trees will be left in a buffer which will follow a riparian area and break the sale into two sections, each less than 120 acres in size. All other hardwood and conifer species will be reserved.

Special Concerns: None

### **Nestucca Basin**

**South Ginger** – The sale is one area totaling 122 acres. The stand was seeded and planted with Douglas-fir in the 1960s and ranges in age from 40 to 45 years. The stand is predominately Douglas-fir with small pockets and stringers of red alder. The northern portion of the area was pre-commercially thinned but the Douglas-fir is becoming overstocked

The sale is planned as a partial cut. The Douglas-fir will have a diameter limit to remove trees with poor height-to-diameter ratios. The remaining Douglas-fir will be thinned to 100 ft<sup>2</sup> to 120 ft<sup>2</sup> basal area. All other conifer and hardwood species will be reserved.

Special Concerns: None

### **Little Nestucca Basin**

There are no harvest operations planned in this basin for FY08.

## **Forest Roads Management**

### **Overview**

The FY08 AOP includes approximately 20.41 miles of new road construction (predominately low use spurs) and 41.49 miles of road improvement. In addition, 17.48 miles of road will be vacated or closed in the Tillamook District. Refer to summary tables in Appendix A for more information.

The constructed and improved roads will provide improved access for recreation opportunities, fire protection, and hauling forest products from the sale areas. Since most of the mainline roads are already in place to access these sales, the new roads will be mostly short, spur roads. The amount of surfacing and road width will depend on the amount of volume that will be hauled on each road segment and the potential long-term use of the road after timber sale completion. These projects may include culvert replacement, side-cast pullback and vacating roads. Guidance for transportation management activities will come from the ODF *Forest Roads Manual*. Specifics within this AOP represent Level III Transportation Planning.

In-stream activity will be restricted to the ODFW guidelines to limit impacts to aquatic habitat and any exceptions will be reviewed with ODFW for site specific approval. End-hauling is required when constructing roads on side slopes greater than 55% and location of waste areas will be reviewed with ODF geotechnical specialist as needed.

District activities to control noxious weeds consist primarily of controlling Scotch broom in and around plantations and along roads. Other species such as knotweed and Himalayan blackberry are targeted for control as well. Noxious weed control will be performed on about 20 acres during the fiscal year. Since many infestations start along roads where soil disturbance occurs during road improvement or construction, the district specifies 100% weed-free grass seed be used and the use of straw for mulch instead of hay.

Table 4. Summary of Road Management Activities. All values are in miles.

	Mainline (High Use)		Collector (Medium Use)		Spur (Low Use)	
	AOP	IP <sup>1</sup>	AOP	IP <sup>1</sup>	AOP	IP <sup>1</sup>
Road Construction	0	0.5-1	0.15	2-3	20.26	2-3
Road Improvement	2.1	10-20	17.3	15-25	22.09	20-30
Road Closure/Vacation	0	0	0.15	2.5-5	17.33	2.5-5
Road Maintenance – District <sup>2</sup>	5	-	90	-	75	-
Road Maintenance – Active Operations <sup>3</sup>	25.64	-	67.75	-	8.4	-

1. These are annual estimates from Table 3-6, pg 27) Potential Road Activities FY 2001-2011 of the 2001 District Implementation Plan. **The values here were derived by dividing the values in the Potential Road Activities table by 10.**

2. The road maintenance estimates include only the work to be completed during Fiscal Year 2008 by the district road crew or service contract. Estimates of road maintenance were not made in the Implementation Plan.

3. This is a broad estimate of the road maintenance that may be accomplished during the fiscal year, through active commercial operations. However, the exact amount can not be predicted at this time.

**Acreages do not include alternative sales.**

## Road Construction

Most of the new construction roads are classified as spur roads. These roads are often short dead-end spurs to access ridge tops and facilitate harvesting operations. Roads will not be located on steep slopes or high landslide hazard locations where risk analysis by the geotechnical specialists determines the probability of failure is high and the risk of resource damage is high. Roads will be designed to the minimum width necessary to accommodate the planned management activity. Legacy roads are roads built during the Tillamook Burn salvage operations and then abandoned. Improvement of legacy roads may be considered new construction if there are trees larger than 5 inches in diameter growing in the road bed. See Road Access Management section below for discussion on road closure and vacation.

## Road Improvement

The majority of roadwork in this AOP is road improvement. Road improvement may consist of surfacing, widening, side cast pullback, and improving drainage structures. Road improvement on the Tillamook District is discussed in two ways: 1) Improvement of existing roads and 2) Improvement of legacy roads. Existing roads have been improved and maintained over the years through timber sales or the district road crew. Legacy roads are roads built during the Tillamook Burn salvage operations and then abandoned. For work on a legacy road to be considered road improvement the legacy road must have a defined roadbed but may be overgrown with shrubs and trees less than 5 inches in diameter. Legacy roads often require sidecast pullback, culvert installation, and resurfacing but the roadbed is defined and minimal equipment work is needed.

## Road Access Management

All surfaced roads are categorized as active use roads. Unsurfaced roads will be water barred during wet season and will be reviewed for partial or full vacation at the end of the sale. In this AOP, approximately 0.15 miles of road is planned for full vacation as project work associated with a timber sale. The *Forest Roads Manual* guidance for road vacation will be followed for this work.

At the end of timber sales, all roads are evaluated for access to future sales, resource considerations, and other use such as fire fighting needs. Roads may be retained, partially vacated, or fully vacated based on this evaluation. At the completion of regeneration harvests, access is needed for tree planting operations and a road may be left open for a longer period of time. After a plantation is free to grow, roads will be closed by the district road crew or added to future timber sales as project work.

In FY05 a pilot project was completed in the Trask and Wilson Basins for temporary closure of roads. This project was completed in partnership with ODFW and Oregon Hunter's Association (Tillamook Chapter) to install gates that were closed during the October and November hunting seasons. This project was continued and expanded in FY06 in the Trask and Wilson Basins. This project will be reviewed each year in consultation with ODFW and Oregon Hunter's Association (Tillamook Chapter) to determine any changes, expansion or reduction in the gate installations.

## Road Maintenance

Timber sale purchasers will maintain timber sale access roads. ODF will maintain other roads. Road maintenance activities are divided into five basic categories; drainage, surface maintenance, cut and fill slopes, erosion control and vegetation control. Culverts, catch basins and ditches will be cleaned as necessary to ensure proper drainage. Road surfaces will be graded only when needed to maintain a smooth, stable running surface and surface drainage. Cut slope ravel will be removed from ditches and unstable fill slope material will be removed to prevent failure. Erosion and sediment control structures, such as culvert downspouts, sediment fencing, straw bales, bio-bags, sediment ponds and bio-filtration swales will be maintained or repaired as necessary to ensure their proper function. Vegetation will be controlled manually, mechanically or chemically where necessary. The method used will depend on the characteristics of the vegetation and its location. Precautions will be used to avoid harm to non-target plants and to prevent any of the herbicide from contaminating water.

Some Level III planning projects (*refer to the Forest Roads Manual*) include removing fish passage barriers, vacating/closing lower elevation roads near streams, constructing roads on higher elevation ridges and the redevelopment of large capacity rock pits suitable for crushing to reduce turbid runoff from the road system.

## **Land Surveying**

Property surveys are required to establish property corners and mark the lines defining State ownership. Sale boundaries are adjacent to other ownership along 9.6 miles of property line for seven sales planned for FY08. Property lines which have been identified and marked in prior surveys will be retraced and refreshed, if required, and others will be surveyed or other means will be used to assure the sale boundary is on ODF property. This work will be accomplished by both State personnel and cost share survey agreements with adjacent landowners. An additional 1.1 miles of property line have been established with a boundary line agreement adjacent to the Southern Gold alternate sale area.

Forty-four existing corners are either within or adjacent to sales and will be maintained in order to preserve their position. This activity requires checking the condition of the monument and its accessories, and establishing new ones if necessary. This work will be accomplished by both State personnel and cost share survey agreements with adjacent landowners.

## Young Stand Management

This section describes the types and anticipated amounts of reforestation and stand management activities that will occur in FY 08. The location and amount (acres) of these activities are estimates based on plans, information and conditions as known at this point in time. The type, amount and specific stand management prescriptions will be further adjusted based on when existing sold harvest units are completed and on updated assessments and surveys.

Reforestation and young stand management requires various combinations of site preparation, planting, animal damage control, vegetation management, and interplanting or replanting. These practices must be considered and prescribed for individual stands on a site-specific basis.

### **Rehabilitation**

None Planned

### **Site Preparation**

Prescribed Fire (Slash Burning): None Planned

Mechanical (Slash Piling): None Planned

Chemical Site Preparation: The site preparation objective is to control brush species to allow stand establishment and maintain 2-3 years of free to grow status. The current estimate is 3315 acres. The actual site preparation plan will be prepared in late spring when harvest

units and brush development is better known. Most chemical site preparation is completed by helicopter spraying.

## **Planting**

Initial Planting: The planting objective is to establish mixed conifer stands at 500 trees per acre on all clearcut areas, both modified clearcuts and retention cuts. Initial plant species will consist of western hemlock, western red cedar, noble fir, and Douglas-fir. Douglas-fir will be included in planting units outside of the areas of severe Swiss needle cast. The target at age 10 is a mixed conifer stand with a minor hardwood component. These stands generally have the most potential to develop into complex stands, are the most resistant to pest and environmental impacts and retain the most future options. The current estimate is 3315 acres of initial planting.

Interplanting: The interplanting objective is to raise conifer stocking in young plantations that are below acceptable levels or below Forest Practices Requirements to a minimum of 250 trees per acre. The current estimate is 440 acres. Actual plans will be made after stocking surveys in the fall.

Underplanting: Candidate stands will be underplanted if surplus trees are available. Candidate stands are generally those stands where natural seed-in of tolerant species is not anticipated and the residual stand density is relatively low. Underplanting is planned for stands to introduce species diversity and to accelerate the establishment of a second cohort.

Natural Regeneration: None planned at this time. Units or portions of units will be assessed prior to planting. Natural regeneration will be considered primarily where small gaps and holes less than 2 acres have been created in partial cut units.

## **Vegetation Management**

The release objective is to attain or maintain free to grow status for current hemlock or mixed conifer plantations by controlling brush species, primarily salmonberry. Release assists with accelerating stand establishment and tree growth for development of complex structures.

Manual: The current estimate is 400 acres. The actual plan will be developed in early spring when brush is more developed and actual needs can be assessed.

Chemical: The current estimate is 1,000 acres. The actual plan will be developed in late spring or early summer when brush is more developed and actual needs can be assessed.

## **Tree Protection**

The objective is to reduce browse by elk, deer, and rodents allowing trees to attain full height growth potential. Tree protection also reduces cost of long-term vegetation management once plantations reach a free to grow stage.

Tube & Pin: The current estimate is 283 acres. This will be in block planted cedar and areas of known heavy browse pressure.

Trapping: The current estimate is 4,500 acres.

## **Precommercial Thinning (density management)**

The PCT objective is to reduce the density in overstocked conifer stands to maintain good individual tree growth rates with good live crown ratios. In mixed species stands with Douglas-fir heavily impacted by Swiss needle cast, species other than Douglas-fir will be favored. The current estimate is 400 acres.

## **Fertilization**

None planned due to the impacts of Swiss needle cast. Past research has found that fertilizing accelerates the impact of Swiss needle cast. Future mixed species plantations may be considered for fertilization.

## **Pruning**

None planned due to impacts of Swiss needle cast. The loss of needle retention in many Douglas-fir plantations does not make pruning a viable tool. By pruning the trees, the crown length is further reduced which in-turn reduces overall tree growth.

## Recreation Management

### **Overview of Recreation Management**

For Fiscal Year 2008 the Tillamook District Recreation Program will operate and maintain existing facilities at the current high standards. The priority will be to maintain the facilities and infrastructure currently in place. Construction projects for FY 2008 include the construction of a trailhead at the Footbridge (mp 19.9, Hwy. 6) with restrooms and day use parking, and a day-use Off Highway Vehicle (OHV) staging with information board and restrooms at Hollywood OHV Staging Area. Work will be accomplished by district recreation staff, volunteers, two OHV equipment operators, South Fork Inmate Crews, Tillamook District Road Crew, and contracts.

## **Facilities Improvement**

### **Footbridge Trailhead**

- Contract out to bid February 07
- Award contract March 07
- Construction completed August 07

### **Hollywood OHV Staging Area**

- Tentative construction contract put out to bid August 07
- Award contract September 07
- Construction complete February 08

### **Nehalem Falls Campground** *(Improvement project contingent upon archeological survey results. Discovery of significant cultural artifacts may delay or halt project)*

- Contract for host septic system & installation of single vault toilet for tent camping area out for bid – March 07
- Contract awarded – April 07
- Construction completed – August 07

### **Keenig Creek Campground**

- Special 342 timber sale completed – July 07
- Clean up, campsite rehabilitation – September 07

### **Wilson River Corridor Vehicle Access Management Plan**

- Develop Vehicle Access Plan addressing resource damage & access for public and utilities - April 07
- Meet with stakeholders and obtain input for plan – May 07
- Contract written to implement plan and forwarded to Salem – July 1<sup>st</sup>, 07
- Contract awarded – September 07
- Work Completed – May 08

## **Planning and Design**

Facility and Trail Maintenance Management Plan developed for Jordan Creek OHV Area. Project involves a complete trail and facility assessment and long term plan for maintenance, upgrades and trail re-routes - November 07.

### **Designated Campsites**

Continue GPS inventory all non-designated dispersed sites in the district and evaluate resource impacts, current use, and feasibility for improvement.

## **Other Business**

Liaison with other natural resource agencies (Oregon Parks & Recreation Department, Oregon Department of Fish & Wildlife, Tillamook County Parks, Bureau of Land Management, Tillamook Estuaries Partnership, and non profit organizations such as Stop Oregon Litter and Vandalism, and NW Steelheaders).

Review AOP 09 timber sales and provide input and recommendations on impacts to recreation program and infrastructure.

Coordinate removal of abandoned vehicles and property and clean up of dumpsites.

Provide support for interpretive and educational programs at Tillamook Forest Center, local schools, and at other ODF districts.

## **Facilities Maintenance**

The following is a list of the facilities to be maintained during the FY 2008 operation period.

- Diamond Mill OHV Campground - Open year round.
- Jones Creek Campground - Open Memorial Day Weekend through September.
- Footbridge Trailhead – Day Use Area – Open year round
- Cedar Butte Trailhead - Open year round
- Keenig Creek Campground – Open year round.
- Sprague Wayside – Open year round
- Nehalem Falls Campground – Open Memorial Day Weekend through September.
- Jordan Creek Off Highway Vehicle Staging Area - Open April through October.
- Hollywood OHV Staging Area - Open year round
- Edwards Creek OHV Learners Area
- Peninsula Day Use Area & Boat Launch – Open year round
- Stones Road Boat Ramp – Open year round
- 53 designated dispersed campsites though-out forest
- Smith Homestead – Open year round (shared responsibility with Tillamook Forest Center)

## **Non-Motorized Trail Construction**

Coal Creek Trails – tie trail from ridge down to Coal Creek Trailhead (approximately ½ mile new trail construction).

## **Non-Motorized Trail Maintenance**

A total of 14.3 miles of trail maintenance is planned. Maintenance includes bridge maintenance, brushing, bridge replacement, slough removal, grade repair, and removal of wind throw.

- Wilson River Trail–Diamond Mill to Keenig Creek Trailhead section – 10.5 miles
- Cedar Butte Trail – 0.75 mile
- Peninsula Trail – 0.8 mile
- Nehalem Falls Trail – 0.5 mile
- Outback Trail 0.3 mile
- Coal Creek Trail 1.4 miles

**Motorized Trail Construction**

Link Pothole Cr. Trail to Murphy Camp - project will facilitate access to stream monitoring site for Watershed Analysis Project on East Fork Trask River.

Motorized Trail Bridges

- Mongos Canyon Trail bridges – 18’ and 24’
- Replace bridge on Buzzard Point Trail (approx. 60’ span)
- Construct new bridge on Spaur Creek Trail (approx. 70’ span)
- Construct new bridge on Kristies Shuttle Trail (approx 60’ span)

**Motorized Trails Maintenance**

Maintenance and upgrade of OHV trails. Work includes rocking, rolling grade dips, assisting with bridge construction, installation of lower gradient re-routes, and seasonal closure of trails to protect the trail and reduce impacts.

Ongoing survey of established OHV trails and inventory of undocumented district OHV trails with special emphasis on the Trask Basin.

**Other Management Activities**

**Tillamook District Volunteer Activities**

Activity	# of Volunteers	Estimate Hours
Camp Host	Up to 12 volunteers for 4 month camping season	Hosts volunteer for one to two month stays and are on duty 5 days/week for approximately 12 hours/day for 4 months Estimate 1920 volunteer hours
Non-motorized trails	Estimate 10 – 15 people per work day	Non motorized trail workdays occur 3 <sup>rd</sup> Saturday of March, May, July, September and last 6 hours.

		Estimate 480 hours
Motorized trails	Estimate 10 people per day	Motorized Trail Work Days – 2 <sup>rd</sup> Saturday of month, January – November. Estimate 800 hours per year
North Coast Travel Management Area	1 volunteer	Est. 500 hours per year
Down by The Riverside Clean Up - SOLV	5 – 10 volunteers	Est. – 40 hours

**Organized Event Administration**

For FY 2008 Tillamook District will assist the OHV Coordinator administering motorized event permits on the Tillamook State Forest. Events include poker runs, races, 4WD runs, dual sport runs, a possible car rally, and observed motorcycle trials. There are 15 planned motorized events in the 2007/2008 season and at least one non-motorized event.

**Law Enforcement**

ODF will contract with Tillamook County Sheriffs Office for 3 full-time deputies at an approximate cost of \$288,000. Tillamook County Sheriff’s Office funds 45% of the program cost with grant funds from the Oregon ATV Fund. The remaining 55% is provided by Oregon Dept. of Forestry. ODF will also bring on an additional forest deputy from May through September to enhance public safety during the high use season.

**North Coast Travel Management Area**

For the last eight years the district has participated in the Oregon Department of Fish and Wildlife (ODFW), North Coast Travel Management Area (TMA). The TMA regulates vehicle travel during the general deer and elk seasons to reduce road damage, increase bull/buck escapement and provide non-motorized hunting opportunities. Tillamook District will continue this partnership with ODFW. Sign maintenance and public contact in the TMA is performed by a volunteer and recreation staff. Enforcement of the TMA is provided by Oregon State Police on a limited basis.

## Land Exchange

No land exchanges are planned during the FY08.

## Other Integrated Forest Management Operations

The Tillamook District is working with ODFW to identify areas for stream enhancement projects. Potential sites have been identified in some individual Pre-operations Reports and other projects are still being reviewed and discussed at this time.

The District will set up and administer commercial and individual wood cutting areas. These areas are used to daylight roads, clean up landings, and salvage windthrow adjacent to roads and concentrated areas where down wood levels are above FMP targets. Commercial permits will also be issued for moss, beargrass, salal, ferns, vine maple, and alder saplings.

## Planning (and Information Systems)

The Tillamook District will use a variety of tools, data sources, and other information for the continuing planning and implementation of the AOP. These consist of computer programs (ArcView, SuperAce, GPS programs, etc), inventories (OSCUR, Road Inventories and Stand Inventories), surveys (T&E, fish presence), and field reconnaissance. These will also be used to assist in setting resource goals for the district, and to monitor progress in achieving those goals. During the FY08, the district will be undertaking the following projects in order to update existing data and acquire new information.

### **Stand Level Inventory and Other Vegetation Inventories**

The Tillamook District Stand Delineation contract was completed in July 2006. A service contract administered by Salem staff is slated to install some 3,939 plots in 365 SLI stands that comprise 30,883 acres. The cruising will occur between now and the end of June 2007. Approximately the same number of stands will be inventoried in FY 08. The stand level inventory will be used for prescription development, AOP implementation, monitoring, and other planning purposes.

There are currently 5759 SLI stands in Tillamook, amounting to 252,337 acres. About 5166 stands and 242,057 acres are suited to SLI cruising. Currently about 45% of the cruisable stands, representing about 55% of the cruisable acres have some SLI cruise plots. Due to recent reconfiguration of SLI boundaries in the district, many of these cruised stands have fewer than the recommended number of SLI plots - only about 2% of cruisable stands, representing about 7% of cruisable acres, have more than 15 plots (16-24 plots are recommended for SLI stands greater than 20 acres in size). The majority of the cruise plots

done in this project will be to "fill in", or add plots to, the stands that now have 6 to 15 plots. The contribution of this new contract cruising project will raise the numbers of stands and acres with more than 15 plots to about 9% and 19%, respectively. Future SLI cruising is in the formative planning stages, to occur in subsequent contract projects.

The district will also be conducting stocking and survival surveys in young stands and plantations. The surveys are used to determine stocking levels, needs for tree planting, release or pre-commercial thinning.

## **Fish and Wildlife Surveys**

### Fish Surveys

Requests will be submitted to ODFW for stream surveys to determine fish presence annually, prior to sale layout. Stream surveys are conducted between March and June of each year. If the surveys are not completed by the time of sale preparation, streams will be treated as fish bearing (Type F). Streams of "unknown status" or "assumed fish status" will be treated as Type F streams until their status is determined. All attempts will be made to verify fish use by time of auction or when sale activities begin.

### Marbled Murrelet Surveys

The Tillamook District will continue its marbled murrelet survey program, in order to comply with federal and state Endangered Species Acts. To date, the USFWS has not issued formal guidelines regarding what constitutes a "take" for murrelets. In the absence of such guidance, ODF will follow *the State Forest Operational Policy, Marbled Murrelet Operational Policies* (January 1, 2005). All marbled murrelet surveys will be conducted in accordance with the Pacific Seabird Group (PSG) most current survey protocol.

ODF completes surveys of potential habitat within or adjacent to planned timber sales. Additional monitoring surveys are planned in Marbled Murrelet Management Areas (MMA).

### Northern Spotted Owl Surveys

In FY08 the district will continue its northern spotted owl survey program, in order to effectively comply with the *Agreement for the Conservation of Northern Spotted Owls* (September 2001) and to comply with ODF's responsibilities under the state Endangered Species Act. The survey method utilized by ODF is the *Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls*. This protocol was originally dated March 1991 was revised March 1992 and is endorsed by the USFWS. The district determines survey requirements for planned timber sales with potential habitat according to the November, 2002 ODF Policy Guidance: *Northern Spotted Owl Surveying on State Forest Lands*.

Contractors complete all surveys and develop final reports for ODF. For both marbled murrelets and northern spotted owls, end of year (survey season) reviews will be done to discuss survey results. This end of season meeting is an opportunity to meet with surveyors

to discuss findings and determine future survey needs and/or needed modifications to proposed operations.

See the table below for a summary of on-going timber sale surveys for marbled murrelet and northern spotted owls.

**Table 7. Summary of status of T&E surveys**

<b>Operation</b>	<b>Species (NSO/MM)*</b>	<b>Status</b>
Beaver Power	NSO/MM	2006/2007
Between Wolves	None Req.	
Clear Hembre	NSO	2005/2006
Cougar Camp	NSO	2006/2007
East Butte	None Req.	
Lower Jones	None Req.	
Mid-Fork Alder	NSO/MM	2006/2007
North Murphy	None Req.	
Phone Murphy	NSO	2006/2007
Point T Boot	MM	2006/2007
Power Bales	None Req.	
Rock n' Roy	NSO/MM	2006/2007
Runyon Ex	None Req.	
Sams Saddle	None Req.	
South Ginger	NSO/MM	2006/2007
Wakefield	NSO/MM	2006/2007
Mary's Butte(Alt)	None Req.	
Musical (Alt)	None Req.	
Seshong (Alt)	None Req.	
Southern Gold (Alt)	None Req.	

\*NSO is Northern Spotted Owls

\*MM is Marbled Murrelet

\*None Req. is "No surveys are required" either because there was no habitat identified within or adjacent to the sale or the NSO habitat is designated as low quality and within the Tillamook Burn Monitoring Survey area.

**Plants**

The proposed harvest operations were screened against the Oregon Natural Heritage Database and known locations on the district to identify potential conflicts with listed plant species. See the specific pre-op report for Point T Boot for more information. The district will work with Department of Agriculture to determine distribution and appropriate protection.

**Watershed Analysis**

The watershed analysis began for the Wilson Basin during FY06 and will continue into FY08. Final assessment and analysis will be completed during summer of FY08. The watershed analysis for the Kilchis Basin is planned to begin during FY08 .

## **Transportation Planning**

The district has started to create a transportation plan to identify an inventory of district roads and their condition along with planned roads needed access to all State Forest land in the district. The Wilson basin is the pilot project to set up the framework for future basin transportation planning process; determining what types of information to gather and how to describe the data. The planning process is being done in conjunction with the watershed assessment project on the Wilson, which is expected to be completed in FY 08. At present, a sub-basin of the Wilson is being used as a proto type to develop the framework for the data collection process. The Road Inventory Maintenance System (RIMS) is also being used to collect data on the current condition of roads in the basin. This data collection program was used to collect information on the Miami basin in FY 06. Data was collected on the Wilson with a service contract in FY 07. RIMS data will be collected on the Kilchis basin and a sub-basin of the East Fork Trask with a service contract administered by Salem staff in FY 08.

## **Research and Monitoring**

The Tillamook District will be involved in a variety of research and monitoring projects in FY08. Study sites and plots will be established and/or maintained on the district. District employees may participate in these projects. The following sections provide brief summaries of current research as well as planned research.

### **Cooperative Forest Ecosystem Research (CFER):**

Cooperative research program supported by OSU, USGS, and ODF. Projects are focused on

- Ecology and management of biodiversity in young stands
- Ecology and management of riparian zones
- Ecology and management of special interest species

This program contributes information on how to tailor forest management to achieve the objectives of long-term Forest Management Plans. CFER is also continuing work initiated by COPE program.

### **Integrative Young Stand Management Strategies for Productivity and Structural Diversity: (OSU, ODF Districts)**

These projects investigate assumptions critical to the successful implementation of the FMP. Two sets of studies are investigating the development of young Douglas-fir monocultures and mixed species stands managed for revenue production with the goal of determining at what specific stage various structural components are lost in the stand. Secondly, the studies are determining under which conditions, if any, management activities can ensure persistence of certain structural components and evaluate the associated tradeoffs in stand growth and economic returns.

### **Swiss Needle Cast Cooperative Studies: (ODF Districts and SNCC)**

- Pre-commercial thinning plot measurements and disease assessments
- Permanent plot measurements and disease assessment
- Sulfur plot measurements, nutrient sampling, disease assessments
- Bravo plot disease assessments

### **Swiss Needle Cast and Commercial Thinning: (OSU, ODF Districts)**

Proposed research will address 1) growth trends following thinning of older stands with varying levels of Swiss needle cast damage, 2) interactive effects of Swiss needle cast with intensity of thinning, and 3) possible interactions between thinning, disease severity, and seed source (where data is available). The approach includes a combination of a retrospective study of stand growth since thinning with permanent monitoring plots to track future growth. The study will require a minimum of 10-year duration to establish trends in stand development after thinning.

### **Stand Structure Development/Coarse Filter Monitoring**

The objective of this study is to examine how stand structure conditions are changing as a result of management prescriptions and to determine whether post-harvest stand structure conditions are developing as anticipated. The stand structure pathways we will be monitoring are stands in the Northwest Oregon Area districts projected to become Understory (UDS), Layered (LYR) and Older Forest Structures (OFS). Currently, only stands in the 2002 to 2004 Annual Operations Plans will be measured. Each stand that will be measured must have a completed harvest. The resulting residual stand characteristics will be the baseline for all future stand development that we will be monitoring. This study will be accomplished for the 10-year review in the year 2011 as required by the FMP and OAR 629-035-0030. It will also continue as a long-term study beyond this 10-year review for decades afterward in order to better describe the process of stand structure development.

Information from this study will also be used as part of the Coarse Filter Monitoring project aimed at defining relationships between stand structure characteristics and native wildlife habitat. The Coarse Filter Monitoring project assesses whether the biological needs of structure dependent species are being met in relation to habitat structure elements recorded during a stand structure survey.

### **Evaluation of Crown Length: Sapwood Area: (ODF)**

Studies thus far have focused on correlating recent tree volume growth with relatively easy-to-obtain field measurements such as foliage retention, discoloration and crown length to sapwood area ratios (CL:SA). Recent work on commercial thinning plots shows CL:SA is a reasonable predictor of volume growth, and the combination of CL:SA and foliage retention is even better (Mainwaring and Maguire). The objective of this evaluation is to estimate recent periodic volume increment, which when adjusted for site index and correlated with SNC damage indices, should provide a reasonable indicator of how well the stand is growing compared to a stand without SNC damage.

**Stream Temperature and Riparian Function: (ODF Forest Practices Monitoring Program (FPMP), ODF State Forests Monitoring Program (SFMP), ODF Districts, Forest Industry)**

ODF SFMP and FPMP are coordinating a study to evaluate stream temperature and riparian condition before and after harvesting. Sites are located on both privately-owned and state-owned forestland. The objective of the study is to provide a coordinated monitoring effort with which to evaluate effectiveness of forest practices rules, and standards on private lands as well as the effectiveness of the aquatic and riparian strategies described in the FMP on state-owned forestland.

**Animal Damage in Plantations: (ODF)**

The formal study compares various stock type and seedling nutrient level combinations as they relate to controlling/preventing animal damage. The study will look at various economic investments (stock type, repellents, physical barriers) and returns (tree survival and growth) in plantations.

**East Fork Trask Fish Traps: (ODF and ODFW)**

A Salmonid Life Cycle Monitoring site was established in cooperation with ODFW during fall 2004 at East Fork Trask hatchery facility (no longer in use). Life Cycle Monitoring collects information on returning adults and out-migrating smolts to provide information on basin productivity and population dynamics. This site augments ODFW's larger Life Cycle Monitoring project covering the Oregon coast. ODF refurbished the facilities and conducts all trapping and stream survey activities. ODFW provides technical oversight and processes, analyzes and interprets data. This project will continue in FY08 and future years.

**Intensive Watershed Monitoring: (ODF)**

ODF State Forests Monitoring Program is working on a project to evaluate if upland, riparian, and aquatic management strategies are effectively achieving goals for riparian and aquatic resources. The study goals and objectives are currently being specified and experimental design being finalized. A portion of the study began in FY05 collecting data on stream flows in the East Fork Trask sub-basin.

**T&E Surveys: (ODF, Contractors)**

See the above section on fish and wildlife for more detail of surveys for spotted owls and marbled murrelets.

**Implementation Monitoring (ODF):**

Implementation monitoring tests the consistency between Forest Management Plan (FMP) management strategies and district operational activities. Further, it seeks to answer if resource objectives, such as green tree and snag retention, are achieved on a district-by-

district basis. Currently, 20% of all partial cuts and 20% of all regeneration harvests will be sampled using a combination of field-based sampling and document review methods.

**Northern Spotted Owls and Marbled Murrelet On-going Monitoring: (ODF, Contractors)**

On-going monitoring is occurring of known sites of Northern spotted owls and marbled murrelets. The objective of these surveys is to determine continued occupancy of the site and movement within designated owl circles or marbled murrelet management areas (MMMA) over time.

**Northern Spotted Owl Surveys of the Tillamook Burn**

Approximately 157,000 acres of the Tillamook State Forest was burned in multiple fires ending in the 1950s. This area has been determined by ODF to constitute a very large expanse of unsuitable and marginal quality habitat for northern spotted owls.

ODF has been conducting monitoring surveys for northern spotted owls in order to determine if any resident spotted owl activity centers exist within this area. ODF has partitioned this landscape into 15 discrete sampling units that will be surveyed in a random order over the next 10 years. Three units will be surveyed for 2 years each, until all 15 of the units have been surveyed. The first year of surveys for the project were implemented 2003. (November, 2002 ODF Policy Guidance: *Northern Spotted Owl Surveying on State Forest Lands, Attachment "B": Monitoring Surveys for Northern Spotted Owls in the Tillamook Burn*)

**Other Planning Operations:**

Tillamook District is also implementing Salmon Anchor Habitat (SAH) Strategies as described in the Implementation Plan. In FY05, the district completed Basin Plans for six basins as listed in the strategy. All operations located in these basins will be tracked in the AOP Summary Table (Salmon Anchor Habitat Table) and any Basin Plan modifications will be addressed in the Operation by Basin section in the Summary Document and in the individual Pre-operations Report.

## Public Information and Education

The district will maintain supporting information for the Implementation Plan, Land Management Classification System, and Annual Operations Plans for public review. Public involvement will include public review and input on the FY08 Annual Operations Plan. District personnel will participate in public education opportunities such as assisting the Tillamook Forest Education and Interpretation program, watershed council meetings, recreation planning meetings, school field trips and other public events as the opportunity arises. The district will continue to meet with concerned citizens or groups when they have specific questions.

The Tillamook Forest Center is in operation at its location on Cedar Creek Flat. Typical activities on-site during this time will include: routine maintenance of the building and grounds; guided and self-guided public use of the trails; access to the river by interpretive trails; continued but minor management activities in the demonstration forest. The Center is expected to host more than 100,000 people per year, generating a fair amount of automobile traffic at the site.

## Administration

There are currently 40 permanent positions and 6 limited duration positions on the Tillamook District responsible for implementing the 2008 Annual Operations Plan. These positions are divided into five functional groups: Forest Management, Engineering, Reforestation, Recreation, and Administration. See the attached organizational chart.

There are four forest management units (Long Range Planning, Short-Term Planning, Sale Preparation, Contract Administration) responsible for all aspects of timber marketing. These activities include planning, unit layout, assisting with road layout and design, timber cruising, timber sale appraisal, contract writing, and contract administration. The Short-Term Planning unit prepares the Annual Operations Plan and the Pre-Operations Reports for the individual sales in the AOP. The Short-Term planning unit administers the contract for T&E surveys. The Long Range Planning unit is responsible for identifying candidates for future sale plans five to ten years into the future. The Contract Administration unit administers all of the timber sale contracts for the district and manages firewood sales and special sales.

The engineering unit is responsible for all aspects of road engineering and land surveying. These activities include road design and layout, rock pit development, road maintenance, property line location, road construction and improvement appraisals, contract preparation, and road contract administration. The engineering unit works with the planning unit in developing the AOP.

The reforestation unit is responsible for all activities in forest plantations from the time the harvesting is complete through pre-commercial thinning. The activities of this unit include site preparation, trapping, tree planting, vegetation management, tree improvement, and pre-commercial thinning. The reforestation unit also coordinates South Fork crews and administers contracts to complete these tasks.

The recreation unit is responsible for implementation of the *Tillamook State Forest Recreation Action Plan 2000* and operation of the overall recreation program including facility maintenance. Program elements include the operation and maintenance of campgrounds, day use areas, trailheads, staging areas, motorized and non-motorized trails, boat ramps, event management, South Fork crew coordination, law enforcement coordination, volunteer recruitment and management, and contract administration. The

recreation unit also reviews AOP documents and works closely with the forest management units for trail protection during operations or trail rehabilitation after operations.

Administration consists of the District Forester, Assistant District Forester, Office Manager, Purchasing Specialist, and two Office Specialists. The District Forester and Assistant District Forester provide policy direction, budget development, and oversight to the field units.

The Office Manager, Purchasing Specialist, and Office Specialists provide clerical support to State Forest Management. These positions are responsible for initial public contact, distribution and filing of documents, and providing assistance at timber sale auctions. The Office Specialist is also responsible for issuing permits for firewood cutting, and special forest products.

The GIS Specialist works with all of the above units. The GIS Specialist assists the units with creating GIS displays for timber sale layout, contracts, and planning documents. The GIS manager also completes maintenance and timely updates to the GIS database and provides overall IT support.

Each of these units is responsible for ensuring the management approaches, activities, and projects are designed to meet the goals, strategies, and objectives of the FMP, Implementation Plan, AOP, and Recreation Plan. The sales and projects are coordinated across the district from the development of the AOP to the final sale administration for consistency within and between units to meet common goals.

## APPENDIXES

### A. Summary Tables

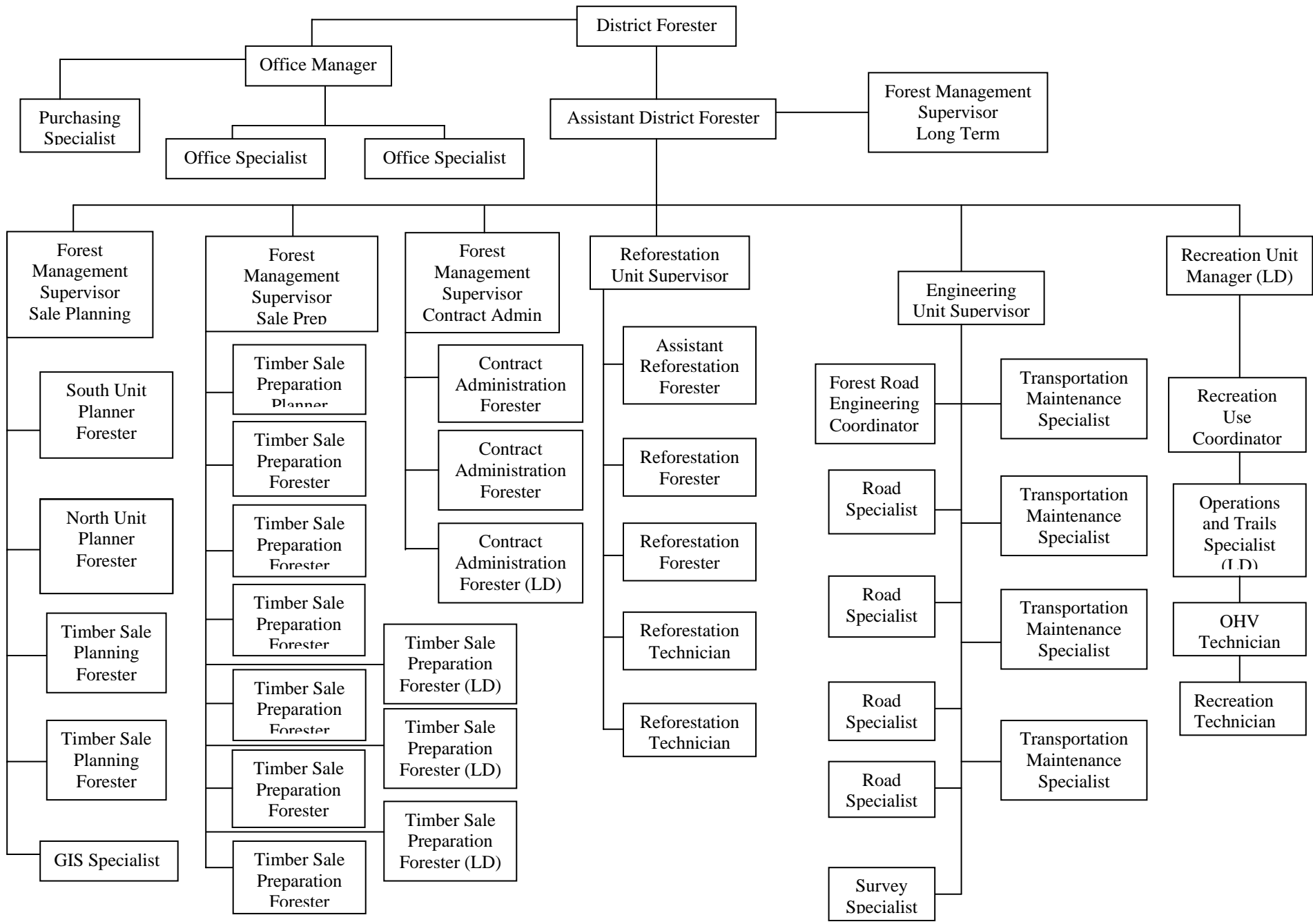
- A-1 Timber Harvest Operations – Fiscal Summary
- A-2 Timber Harvest Operations – Integrated Strategies Summary
- A-3 Forest Roads Management Fiscal Summary
- A-4 Young Stand Management Fiscal Summary
- A-5 Recreation Management Fiscal Summary
- A-6 SAH

### B. Pre-Operations Reports

- Vicinity Map (1; showing all Commercial Operations) relative to the district ownership.
- Pre-Operations Reports (including maps and Biologic Assessments [for those operations requiring them]).

### C. Public Involvement

# Tillamook District Organization Chart



### TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: Tillamook				Fiscal Year: 2008				Date: December 28, 2006					
Operation	Payment Type	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
		BOF	CSL			Partial Cut	Clear-cut	Conifer	Hardwoods	Total	Gross	Projects	Net
Beaver Power	R	100%	0%	Tillamook	1	94	0	1.1	0.0	1.1	\$106,272	\$40,600	\$65,672
Between Wolves	R/C	100%	0%	Tillamook	3	0	168	1.3	0.6	1.9	\$480,500	\$94,500	\$386,000
Clear Hembre	R	100%	0%	Tillamook	2	0	556	5.0	0.5	5.5	\$1,089,374	\$257,257	\$832,117
Cougar Camp	R/C	98%	2%	Tillamook	2	992	0	10.8	4.2	15.0	\$2,345,880	\$483,800	\$1,862,080
East Butte	R	100%	0%	Tillamook	2	0	195	1.9	0.3	2.2	\$564,750	\$45,950	\$518,800
Lower Jones	R	100%	0%	Tillamook	4	252	24	2.3	0.0	2.3	\$442,750	\$149,083	\$293,667
Mid-Fork Alder	R/C	100%	0%	Tillamook	4	0	187	0.6	2.4	3.0	\$666,970	\$146,190	\$520,780
North Murphy	R	100%	0%	Tillamook	3	93	119	1.0	1.1	2.1	\$423,720	\$155,688	\$268,032
Phone Murphy	R	100%	0%	Tillamook	1	220	0	1.6	0.0	1.6	\$272,300	\$151,170	\$121,130
Point T Boot	R	100%	0%	Tillamook	2	174	209	4.7	0.4	5.1	\$555,100	\$136,885	\$418,215
Power Bales	R/C	100%	0%	Tillamook	1	274	77	2.0	0.4	2.4	\$505,447	\$144,950	\$360,497
Rock n' Roy	R/C	100%	0%	Tillamook	1	102	126	1.9	1.4	3.3	\$524,874	\$181,628	\$343,246
Runyon Ex	R/C	100%	0%	Tillamook	3	0	343	3.6	1.8	5.4	\$1,145,695	\$230,140	\$915,555
Sams Saddle	R	100%	0%	Tillamook	4	62	207	2.6	0.5	3.1	\$625,120	\$211,580	\$413,540
South Ginger	R	100%	0%	Tillamook	4	122	0	1.0	0.0	1.0	\$180,075	\$40,600	\$139,475
Wakefield	R	100%	0%	Tillamook	3	222	123	3.0	1.8	4.8	\$1,074,676	\$432,438	\$642,238
<b>Total:</b>						<b>2,607</b>	<b>2,334</b>	<b>44.4</b>	<b>15.4</b>	<b>59.8</b>	<b>\$11,003,503</b>	<b>\$2,902,459</b>	<b>\$ 8,101,044.00</b>

Alternate Operations													
Marys Butte	R	100%	0%	Tillamook	Alt	135	0	1.5	0.0	1.5	\$259,350	\$75,250	\$184,100
Musical	R/C	100%	0%	Tillamook	Alt		240	2.1	0.9	3.0	\$766,365	\$88,100	\$678,265
Seshong	R/C	100%	0%	Tillamook	Alt		202	1.0	1.1	2.1	\$532,250	\$91,453	\$440,797
Southern Gold	R	100%	0%	Tillamook	Alt		185	1.2	0.4	1.6	\$412,750	\$106,060	\$306,690
Alternate Total						135	627	5.8	2.4	8.2	\$1,970,715.00	\$360,863.00	\$1,609,852.00

<b>Total All Operations</b>						<b>2,742</b>	<b>2,961</b>	<b>50.2</b>	<b>17.8</b>	<b>68.0</b>	<b>\$12,974,218.00</b>	<b>\$3,263,322.00</b>	<b>\$9,710,896.00</b>
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## TIMBER HARVEST OPERATIONS - FOREST STRUCTURE SUMMARY

**District:** Tillamook      **Fiscal Year** 2008      **Date:** December 28, 2006

Operation	Area	Net Acres			Stand Structure Development Pathway			Structural Components	Comments
		Clearcut	Partial Cut	Total	Current	Post-Harvest	Desired	Green Trees Per Acre	
<b>Lower Nehalem</b>									
Cougar Camp	Area 1	0	333	333	CSC	UDS	GEN	nr	
	Area 2	0	539	539	CSC	UDS	GEN (89%) LYR (6%) OFS (5%)	nr	
	Area 3	0	120	120	CSC	UDS	LYR	nr	
Mid-Fork Alder	Area 1	72	0	72	CSC	REG	GEN	6 to 9	
	Area 2	115	0	115	UDS	REG	GEN	6 to 9	
Point T Boot	Area 1	159	0	159	CSC	REG	LYR (67%) OFS (33%)	25 to 30	
	Area 2	0	174	174	CSC	UDS	GEN (35%) OFS (65%)	nr	
	Area 3	50	0	50	CSC	REG	OFS	10 to 13	
Rock n' Roy	Area 1	126	0	126	UDS	UDS	GEN (54%) LYR (46%)	nr	
	Area 2	0	102	102	UDS	UDS	OFS	nr	
Wakefield	Area 1	0	222	222	CSC	UDS	LYR (64%) OFS (36%)	nr	
	Area 2	123	0	123	CSC	REG	LYR (2%) OFS (98%)	13 to 15	
<b>Kilchis</b>									
Sams Saddle	Area 1	84	0	84	CSC(96%) UDS (4%)	REG	OFS (96%) GEN (4%)	9 to 11	
	Area 2	88	0	88	CSC(23%) UDS (77%)	REG	GEN (23%) OFS (77%)	10 to 13	
	Area 3	0	41	41	CSC(29%) UDS (71%)	UDS	OFS (29%) GEN (22%) LYR (49%)	nr	
Beaver Power	Area 1	0	14	14	CSC	UDS	GEN	nr	
<b>Wilson</b>									
Beaver Power	Area 1	0	80	80	CSC	UDS	OFS	nr	
Between Wolves	Area 1	68	0	68	CSC	REG	GEN	6 to 9	
	Area 2	100	0	100	CSC(16%) UDS (84%)	REG	GEN(98%) LYR (2%)	6 to 9	
East Butte	Area 1	112	0	112	CSC	REG	LYR	6 to 9	
	Area 2	83	0	83	CSC	REG	LYR	6 to 9	

Operation	Area	Net Acres			Stand Structure Development Pathway			Structural Components	Comments
		Clearcut	Partial Cut	Total	Current	Post-Harvest	Desired	Green Trees Per Acre	
Lower Jones	Area 1	0	252	252	CSC(22%) UDS (88%)	UDS	GEN(42%) LYR (58%)	nr	
	Area 2	24	0	24	CSC	REG	LYR	40 to43	
Runyon Ex	Area 1	97	0	97	UDS	REG	GEN (9%) OFS (91%)	6 to 9	
	Area 2	120	0	120	UDS	REG	LYR	10 to 15	
	Area 3	36	0	36	UDS	REG	GEN (50%) LYR (25%) OFS (25%)	6 to 9	
	Area 4	49	0	49	UDS	REG	GEN (73%) OFS (27%)	6 to 9	
	Area 5	41	0	41	UDS	UDS	GEN	25 to 30	
Sams Saddle	Area 1	35	0	35	UDS (94%) CSC (6%)	REG	GEN (94%) OFS (6%)	6 to 9	
	Area 3	0	21	21	UDS	UDS	GEN (71%) LYR (29%)	nr	
<b>Trask</b>									
Clear Hembre	Area 1	120	0	120	CSC	REG	GEN	6 to 9	
	Area 2	436	0	436	CSC	UDS	GEN (48%) LYR (30%) OFS (22%)	35 to 40	
North Murphy	Area 1	119		119	CSC	REG	GEN	6 to 9	
	Area 2	0	93	93	CSC	UDS	GEN	nr	
Phone Murphy	Area 1	0	106	106	CSC(88%) UDS (12%)	UDS	OFS (88%) LYR (12%)	nr	
	Area 2	0	114	114	CSC(25%) UDS (75%)	UDS	OFS (25%) LYR (75%)	nr	
Power Bales	Area 1	0	92	92	CSC	UDS	GEN (48%) LYR (52%)	nr	
	Area 2	77	0	77	CSC	REG	GEN (18%) LYR (82%)	6 to 9	
	Area 3	0	182	182	CSC	UDS	GEN (6%) LYR (55%) OFS (39%)	nr	
<b>Nestucca</b>									
South Ginger	Area 1	0	122	122	UDS	UDS	OFS	nr	
<b>Total</b>		<b>2334</b>	<b>2607</b>	<b>4941</b>				<b>15 to 19</b>	
<b>Annual Range</b>		<b>2000-6200</b>	<b>1000-3000</b>	<b>4500-7600</b>					

Operation	Area	Net Acres			Stand Structure Development Pathway			Structural Components	Comments
		Clearcut	Partial Cut	Total	Current	Post-Harvest	Desired	Green Trees Per Acre	
<b>Alternate Operations</b>									
Marys Butte	Area 1	0	135	135	CSC	UDS	GEN(22%) LYR (78%)	nr	
Musical	Area 1	120	0	120	CSC	REG	LYR	6 to 9	
	Area 2	120	0	120	CSC	REG	GEN (58%) LYR (42%)	6 to 9	
Seshong	Area 1	202	0	202	CSC	REG	OFS	9 to 15	
Southern Gold	Area 1	185	0	185	CSC	REG	OFS	8 to 10	

## FOREST ROADS SUMMARY

District: Tillamook		Fiscal Year: 2008		Date: December 28, 2006					
Operation	Construction		Improvement		Other Projects	Total Project Costs	Gross Value of Operation	Total Cost as a percent of Gross Value	Comments
	Miles	Cost	Miles	Cost					
Beaver Power	0.70	\$ 22,400	1.7	\$ 18,200.0	\$ -	\$40,600	\$106,272	38.2%	
Between Wolves	0.30	\$ 12,000	3.9	\$ 82,500.0	\$ -	\$94,500	\$480,500	19.7%	
Clear Hembre	1.70	\$ 46,452	3.0	\$ 91,825.0	\$ 118,980	\$257,257	\$1,089,374	23.6%	Trask Road Use Fee & stream crossings
Cougar Camp	2.55	\$ 204,000	5.4	\$ 255,800.0	\$ 24,000	\$483,800	\$2,345,880	20.6%	stream crossings
East Butte	0.80	\$ 32,000	0.72	\$ 13,950.0	\$ -	\$45,950	\$564,750	8.1%	
Lower Jones	1.15	\$ 84,100	1.47	\$ 61,800.0	\$ 3,183	\$149,083	\$442,750	33.7%	vacate 0.15 miles
Mid-Fork Alder	1.00	\$ 109,100	1.7	\$ 37,090.0	\$ -	\$146,190	\$666,970	21.9%	
North Murphy	0.44	\$ 17,600	1.2	\$ 96,000.0	\$ 42,088	\$155,688	\$423,720	36.7%	Trask Road Use fee
Phone Murphy	0.67	\$ 10,050	2.0	\$ 30,000.0	\$ 111,120	\$151,170	\$272,300	55.5%	Trask Road Use fee & bridge
Point T Boot	0.75	\$ 59,025	4.0	\$ 73,360.0	\$ 4,500	\$136,885	\$555,100	24.7%	stream crossings
Power Bales	1.57	\$ 65,550	0.61	\$ 30,500.0	\$ 48,900	\$144,950	\$505,447	28.7%	Trask Road Use Fee
Rock n' Roy	1.80	\$ 167,628	0.1	\$ 14,000.0	\$ -	\$181,628	\$524,874	34.6%	
Runyon	3.40	\$ 162,100	2.0	\$ 68,040.0	\$ -	\$230,140	\$1,145,695	20.1%	
Sams Saddle	1.53	\$ 63,780	6.38	\$ 147,800.0	\$ -	\$211,580	\$625,120	33.8%	
South Ginger	0.00	\$ -	2.0	\$ 40,600.0	\$ -	\$40,600	\$180,075	22.5%	
Wakefield	1.50	\$ 340,638	4.5	\$ 91,800.0	\$ -	\$432,438	\$1,074,676	40.2%	
<b>Total:</b>						<b>\$2,902,459</b>	<b>\$11,003,503</b>	<b>26.4%</b>	

Alternate Operations									
Marys Butte	0.28	\$ 27,000	0.96	\$ 48,250.0	\$ -	\$75,250	\$259,350	29.0%	
Musical	0.62	\$ 24,800	3.42	\$ 63,300		\$88,100	\$ 678,265	13.0%	
SeShong	0.04	\$ 16,000	1.07	\$ 32,873	\$ 42,850	\$91,723	\$ 532,250	17.2%	Trask Road Use Fee
Southern Gold	0.8	\$ 68,000	0.9	\$ 33,560	\$ 4,500	\$106,060	\$ 412,750	25.7%	stream crossings
<b>Total:</b>						<b>\$285,883</b>	<b>\$1,623,265</b>	<b>17.6%</b>	

### Road Projects Not Associated with Commercial Forest Management Operations

Brushing			140	84,000		\$84,000
Spraying			137	18,495		\$18,495
						\$0

## Reforestation and Young Stand Management Report

District: Tillamook

Fiscal Year: 2008

Date: December 28, 2006

Management Activity	Board of Forestry			Common School Forest Lands			District	
	Acres Planned	Average Cost*/Acre	BOF Cost	Acres Planned	Average Cost*/Acre	CSL Cost	Total Acres	Total Cost
Initial Planting	3,000	\$275.00	\$825,000.00	315	\$275.00	\$86,625.00	3,315	\$911,625.00
Interplanting	400	\$225.00	\$90,000.00	40	\$225.00	\$9,000.00	440	\$99,000.00
Underplanting	0		\$0.00			\$0.00	0	\$0.00
Tree Protection-Barriers	280	\$250.00	\$70,000.00	3	\$250.00	\$750.00	283	\$70,750.00
Tree Protection-Direct Control	4,000	\$60.00	\$240,000.00	500	\$60.00	\$30,000.00	4,500	\$270,000.00
Site Prep-Chemical- Aerial	3,000	\$70.00	\$210,000.00	315	\$70.00	\$22,050.00	3,315	\$232,050.00
Site Prep-Chemical- Hand	0		\$0.00			\$0.00	0	\$0.00
Site Prep -Slash Burning	0		\$0.00			\$0.00	0	\$0.00
Site Prep -Mechanical	0		\$0.00			\$0.00	0	\$0.00
Fertilization	0		\$0.00			\$0.00	0	\$0.00
Noxious weeds	NA		\$10,000.00	NA		\$1,000.00	NA	\$11,000.00
Release-Chemical- Aerial	900	\$50.00	\$45,000.00	100	\$50.00	\$5,000.00	1,000	\$50,000.00
Release,-Chemical-Hand	100	\$100.00	\$10,000.00			\$0.00	100	\$10,000.00
Release-Mechanical-Hand	400	\$100.00	\$40,000.00			\$0.00	400	\$40,000.00
Precommercial Thinning	400	\$175.00	\$70,000.00			\$0.00	400	\$70,000.00
Pruning	0		\$0.00			\$0.00	0	\$0.00
Other Stocking Surveys	5,700	\$10.00	\$57,000.00	300	\$10.00	\$3,000.00	6,000	\$60,000.00
<b>Totals</b>	<b>18,180</b>	<b>--</b>	<b>\$1,667,000.00</b>	<b>1,573</b>	<b>--</b>	<b>\$157,425.00</b>	<b>19,753</b>	<b>\$1,824,425.00</b>

\*Planting costs include all costs including seedlings

\*Tree Protection-Barriers costs include all labor and material costs

## RECREATION MANAGEMENT SUMMARY

Tillamook District

Fiscal Year:

2008

Date:

January 15, 2007

Operation	Unit of Measure	Current	Construction Projects (new construction)	Estimated Construction Cost		Improvement Projects (existing)	Estimated Improvement Cost		Total Cost	Comments
				ODF	Other		ODF	Other		
<b>Facilities</b>										
Campsites	sites	68				Nehalem Falls septic and vault toilet, Keenig Creek Campsites, Jones Creek Pole Barn	76,500		\$76,500	
Day Use Areas	areas	7				Keening, Creek, Footbridge, Wilson River Jones Creek	267,000		\$267,000	
Trailheads	TH	5				Footbridge Parking area and vault toilets	120,000		\$120,000	
Interpretive Sites	sites	2	Trask Park	4,200	\$2,500				\$6,700	
Designated Dispersed Campsites	sites	50				Inventory and clean-up	4,500		\$4,500	
OHV Staging Areas	staging areas	3				Hollywood parking area and vault toilets	74,000	\$22,000	\$96,000	
<b>Trails</b>										
Non-Motorized	Miles	8.5	Coal Creek 1/2 mile and two bridges	26500.0		14.3 miles of maintenance and storm damage	44000.0	\$21,000	\$91,500	
Motorized	Miles	120.0				Jordan Creek Facility Maintenance plan, 23 miles of maintenance and storm damage	151000.0	\$63,000	\$214,000	

**Total: \$876,200**

### SALMON ANCHOR HABITAT HARVEST SUMMARY

District: Tillamook

Fiscal Year: 2008

Date: January 17, 2007

SAH Basin Name <sup>3</sup>	Total Acres in Basin	Total Harvest (Partial Cut & Regeneration)				Regeneration			
		Allowable Percent <sup>1</sup>	Allowable Acres	Acres in AOP 08	Acres to Date <sup>2</sup>	Allowable Percent <sup>1</sup>	Allowable Acres	Acres in AOP 08	Acres to Date <sup>2</sup>
Ben Smith Creek	3,977	15	596	343	422	10	397	302	326
Cedar Creek	7,214	NA	--	444	1545	25	1,803	192	1,293
Coal Creek	1,052	NA	--	0	220	25	263	0	141
Cook Creek	18,862	NA	--	383	3412	25	4,715	209	1,299
E Fork S Fork Trask	15,627	NA	--	38	2734	25	3,906	3	2,135
Elkhorn <sup>4,5</sup>	4,240	15	636	100	449	10	424	0	0
Foley Creek	4,403	15	660	0	231	10	440	0	176
Little N Fork Wilson	10,310	NA	--	90	1766	16	1,649	67	1,649
Miami	13,910	NA	--	0	1292	12	1,669	0	547
Middle Kilchis	14,155	15	2,123	208	488	10	1,415	169	449
S Fork Salmonberry <sup>4</sup>	3,536	15	530	0	489	10	353	0	0

1. These columns list the regeneration and partial cut limits identified in the Salmon Anchor Habitat Strategy; not all basins have limits identified for partial cuts.

2. These columns summarize the operations planned and conducted during the period beginning July 1, 2001 through the current planned fiscal year. Does not include alternate sales

3. Basin Plans have been developed for Cedar, Coal, and Cook Creeks, and in the East Fork South Fork Trask, Little North Fork Wilson, and Miami Rivers.

4. These SAH basins fall in both the Forest Grove and Tillamook Districts. The "Total Acres in Basin" column in the table above are district specific acres. The total management within the shared basins are in alignment with the Salmon Anchor Habitat Strategies.

5. 75 acres of partial cut where in the Tillamook District but were part of the Forest Grove Sale Reimer Reason.