

TABLE OF CONTENTS

INTRODUCTION.....	3
INTEGRATED FOREST MANAGEMENT OPERATIONS.....	4
Timber Harvest Operations.....	4
Overview of Timber Harvest Operations	4
Landscape Design	6
Green Tree, Snag and Down Wood Strategies.....	7
Aquatic Resource Protection Strategies.....	10
Stand Structure Development.....	10
Summary of Operations by Basin.....	11
Forest Roads Management.....	17
Overview.....	17
Road Construction	18
Road Improvement	18
Road Access Management	19
Road Maintenance.....	19
Land Surveying	20
Young Stand Management.....	20
Rehabilitation.....	20
Site Preparation.....	20
Planting.....	21
Vegetation Management.....	21
Tree Protection.....	22
Precommercial Thinning (density management).....	22
Fertilization	22
Pruning	22
Recreation Management	22
Overview of Recreation Management.....	22
Facilities Improvement	23
Recreation Planning.....	23
Facilities Maintenance.....	24
Other Management Activities.....	27
Other Business.....	29
Land Exchange	29

Other Integrated Forest Management Operations	30
Planning (and Information Systems)	30
Stand Level Inventory and Other Vegetation Inventories.....	30
Fish and Wildlife Surveys.....	30
Plants.....	32
Watershed Analysis	32
Transportation Planning.....	32
Research and Monitoring.....	32
Public Information and Education.....	36
Administration.....	37
A. Summary Tables	40
B. Pre-Operations Reports	40
C. Public Involvement	40

TILLAMOOK DISTRICT

2010 ANNUAL OPERATIONS PLAN

INTRODUCTION

This annual operations plan (AOP) covers the State Forest Land managed by Tillamook District for Fiscal Year 2010 (FY10), which begins July 1, 2009 and ends June 30, 2010. 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 2010 harvest levels¹, the district has included 47 MMBF of timber harvest in this Annual Operations Plan (Table A-1).

The district has included four Alternate Operations in this Annual Operations Plan and three sales from the 2008 AOP for public review. These alternate operations may be used to replace regular sales that cannot be completed as planned. The three 2008 AOP sales are being included in the public review because they will not be sold before the two year approval period for the 2008 sale plan expires on July 1, 2009.

¹ Oregon State Forests Guidance 2010 Annual Operations Planning Guidance dated July 1, 2008.

The proposed timber sales are planned to be designed, engineered, and submitted for processing during the FY10 time period. Due to market conditions and a backlog of past sales that are not viable in today's markets, some timber sales may not be processed and auctioned until after FY2010. The actual on-the-ground operations will likely not occur during FY10 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 FY10 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		2010 AOP Objective ¹
	Low	High	
Partial Cut	850	3,450	1,112
Regeneration Harvest	800	3,150	2,146
Reforestation (Initial Planting)	-	-	
Precommercial Thinning	0	6,000	300
Fertilization	0	0	0

1. Acreages do not include alternate sales.

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 revenue to the counties with the overall objective of **47 MMbf**.

The IP harvest levels are based on total acres which range from 1,650 – 6,600 acres. Total planned acres in this AOP are 3,258 acres which achieves the volume target. Harvest activities in this AOP are partial cuts (34%) and regeneration (66%) which is within the IP range and the total harvest acres are within the acreage range. Refer to the following definitions for additional information:

http://www.odf.state.or.us/stateforests/aop/docs/HarvestDefinitions_Text.asp.

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, keep stands in a UDS or LYR condition, or to maintain complex stand 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 green trees per acre, an additional 2 hard snags per acre or 2 green trees for future snags, and an average of 600-900 cubic feet of down wood per acre or additional green trees (3 to 6 trees) to provide a future source for 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 with 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.

Some 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. 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. Not all hardwoods are removed in these types of operations and a component will be retained in a variety of locations (on high landslide hazard locations, in riparian areas, and/or grouped with conifer 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 severe and moderate SNC zones

(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 stands for timber sales as well as planned prescriptions. The prescriptions for SNC stands discussed in this plan are based on stand growth using the most recent information available to the district.

As part of the 2010 AOP planning process a cruise contract (service contract) was used to collect stand data on many sale areas. Stands dominated by Douglas-fir had growth analysis measurements taken to compare stand growth to modeled stands of the same site class. The data is still being analyzed at this time and will be used to inform and potentially adjust the final stand prescriptions during sale layout. If any changes are needed from the plans the appropriate specialists will be contacted and necessary modifications completed and approved prior to the sale.

Regeneration harvest operations are also planned in other 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 (height to diameter ratios greater than 80) and poor candidates for partial cutting. These stands may be harvested using a prescription which leaves trees in the largest diameter class scattered across the unit or in clumps. These types of stands are CSC or UDS and will create REG or UDS structure after harvest.

Refer to the individual PreOp Reports and attached summary tables for the current stand structure and Desired Future Conditions.

Landscape Design

The landscape design is a long term vision of the desired future condition for an array of stand structures across the district. To achieve the design a variety of silviculture prescriptions will be applied to diverse 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 shown as future complex structure were identified as having the potential to move most quickly toward complex structure or are in locations where complex stands are desirable. Stands which presently contain dominate trees and other structure which allows it to be managed to a complex structure will have some density management to keep the stand progressing. In areas where the present stand is unable to be managed toward complex structure (hardwood stand and very dense conifer stands) the stand will be harvested and a new mixed species stand established to create a future complex stand. 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.

Green Tree, Snag and Down Wood Strategies

The Forest Management Plan discusses goals for green tree, snag, and down wood at a landscape level and per AOP. The PreOperations Reports discuss specific strategies for each operation and sale area. The following sections describe guidelines and strategies the district is implementing to achieve these structural components. The landscape goals will be evaluated by basins (5th field HUCs) and sub-basins (6th field HUCs) across the district. Some of the harvests to treat slow-growth from SNC and off-site seed are in stands of younger age classes and may require deferring snag and down wood creation in order to achieve the required size classes.

These strategies have been evolving since the FMP adoption and will continue to change as more data is available for each management basin. The data will be collected by Stand Level Inventory, Implementation Monitoring, and post harvest down wood sampling. Green tree, snag, and down wood management tactics may need to change for operational consideration or other unforeseen reasons during the preparation of the timber sale. These changes will be documented; the reason for the change will be addressed along with the new management strategy.

GREEN TREES

District Guidance: On clearcut harvests where there are less than 10 conifer trees per acre greater than 17 inches DBH, additional green trees totaling 10-12 trees per acre will be left in various arrangements and locations to supplement the lack of larger trees for snag and down wood creation. On clearcut harvests where there are at least 10 conifer trees per acre greater than 17 inches DBH, 5 trees per acre will be left for green trees.

Arrangement: Upon completion of harvest, green trees will be left in variety of patterns within the harvest unit. The patterns may be scattered or clumped within the sale areas or located in green tree retention areas or larger riparian buffers outside the operations area but within the harvest unit. It is preferable for leave trees to be left in a combination of arrangements within the harvest unit. District guidelines are for a minimum of two combinations to be used for each sale.

Type: The majority of green trees retained in harvest units will be conifer species. In harvest units with hardwoods, some hardwoods may be retained in the sale area but they are likely non-merchantable trees or trees or clustered in riparian areas and/or High Landslide Hazard Locations.

Numbers: To meet the FMP requirements 5 trees per acre in all regeneration harvests, trees are left in or adjacent to sale area within a harvest unit. As discussed under the *Arrangement* section, the 5 trees may not be found scattered evenly across the unit.

Size: Green trees can be in a variety of sizes. Depending on the type of prescription applied, most green trees will have a diameter of 11" DBH or greater. Many of the harvest units will have residual green trees at least 15" DBH.

Mortality of some of these green trees is expected due to wind, or snow damage or disease. Overall, the goal of green tree retention is to have multiple species, in multiple arrangements and be large diameter trees in future stands.

SNAGS

District Guidance: Stand Level Inventory and cruise data is used to determine the number and decay class of existing snags in each harvest unit. The data is also reviewed at a sub-basin (6th field) level to meet the FMP goal of 2 hard snags per acre on the landscape.

- If the data shows less than 2 snags per acre in decay class 1 and 2 and the stand contains 10 or more conifer trees per acre 17 inches DBH and greater scattered over at least half of the harvest unit, then snags will be created.
- If a stand has less than 10 conifer trees per acre 17" DBH or greater, then 2-3 additional green trees per acre will be reserved for future snags. These additional green trees will grow into larger diameter class and are expected to become snags through natural processes or created during future management entries. Therefore, not all harvest units will have snags created at the end of the operation.
- If SLI and/or cruise data evaluated at the sub-basin (6th field) level show the sub-basin is deficient in hard snags (Class 1 and 2), additional snags may be created or additional trees retained in the sales with a DFC of complex structure to be available for future snags.

Arrangement:

- Existing Snags – Snags currently present in the stand, will be reserved from felling as long as the snags are not a safety issue. If existing snags are cut, they will be left to contribute to down wood goals. Existing snags should be left in leave-tree clumps where possible so they do not pose a safety hazard and can be kept on the landscape.
- Created Snags – When green trees are girdled or topped as part of the operation, they will have arrangements similar to the green tree retention described above. The snags may be scattered across the harvest unit, created in clumps, created in riparian areas or even outside a sale area.

Type: Conifer will be targeted for snag creation

Numbers: Snags will be created to average 2 per acre but as described above, some areas of a unit may have more and some areas may have less.

Size: A conifer tree will be greater than 15" DBH for snag creation. Created snags should be at least 20" DBH in order to optimize the number of wildlife species who can use the snag.

Special Concerns: There is Operationally Limited areas identified in the sale area. The sale area also contains several OHV trails.

DOWN WOOD

District Guidance: Stand Level Inventory data is used to determine the amount and decay class of down wood in each unit. For all AOP sales, all existing down wood will be retained. For regeneration harvests, all sales will evaluate the need for down wood creation to meet the FMP goal of 600-900 cubic feet/acre in decay class 1 and 2 or deferral by using the following criteria:

- If the data shows less than 600-900 cubic feet per acre in decay class 1 and 2 and the stand contains 10 or more conifer trees per acre 17 inches DBH or greater, then down wood will be created.
- If a stand contains less than 10 conifer trees per acre 17" DBH or greater, then 2-4 additional green trees per acre will be reserved and no additional down wood will be created with this harvest. These additional green trees will grow into larger diameter class and are expected to become down wood through natural processes or created during future management entries. Therefore, not all harvest units will have down wood created at the end of the operation.

Arrangement: During harvest operations, any felled snags will be left in the unit for down wood. Tops are also reserved on ground yarding areas and will be left in concentrations or scattered on gentler slopes.

- Existing: Down wood currently present in the harvest unit will be reserved from yarding.
- Created Down Wood – Down wood can be created in several ways on each harvest unit. The method(s) will depend on the existing stand and the amount, size, and arrangement of conifer trees.
 - Defect will be bucked out of felled timber in 6 foot or greater lengths. Sales with oversized timber may allow the logs greater than a specific diameter to be left for down wood.
 - In some areas additional trees may be felled to meet the down wood goals. When green trees are felled as part of the operation, they will have arrangements similar to the green tree retention described above. The felled trees may be scattered across the unit, created in clumps, created in riparian areas or even outside a harvest unit.
 - Additional trees will be left in sale areas when the conifer tree sizes do not meet the minimums described above. These trees will also be left in a varied arrangement, scattered, clumped, in green tree locations, and in buffers.

Type: Conifer will be targeted for down wood creation

Numbers: The number of trees felled for an operation will depend on the size to meet the target cubic feet per acre in regeneration harvest units. Implementation monitoring has shown an average of 200 cubic feet is created with no down wood creation in a harvest unit. Additional 400 to 700 cubic feet would need to be created.

Size: Trees 18" DBH and greater will be targeted for down wood creation.

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 during the in-stream operations period for the stream, which for this district is usually between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

There are 11 sub-basins (6th field) 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 is tracked in the attached Salmon Anchor Summary Table in Appendix A.

The following sales are located within SAH Basins:

East Fork Trask Basin – Pothole (Alt), 390 acres
Coal Creek Basin – North Coal (Alt), 23 acres
Ben Smith Basin – Runyon Ex (2008 AOP) 372 acres

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 for grants when done in conjunction with work on private or county land.

There is one sale in the 2010 sale plan, Montague Ridge, that has a domestic water right downstream of the sale on Montague Creek, and there is one sale from the 2008 AOP (being shared for public comment) Cougar Camp, that is upstream of a domestic water right on Cronin Creek. All domestic water rights will be protected as required by FMP and Forest Practices Act. The individual water rights holders will be contacted during the beginning of sale preparation activities. The District will continue to work with the landowners during sale layout, harvest, and reforestation to assure protection of the water sources.

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 1.3% (acres) of the district with these

planned harvest operations. The rate (acres/year) of partial cut harvest in this AOP is 0.5% and the rate of regeneration harvest is 0.8%

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	GEN¹
Current	-	2486	3258	0	-	
Post Harvest²	2213	-	840	164	-	
Desired Future				154	416	2688

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 FY10 sale plan is estimated to generate gross revenues of approximately \$5,597,548 and net revenues of \$4,391,371. It is estimated that active management will result in producing approximately 34.4 million board feet of conifer volume, 12.6 million board feet of hardwood volume, for a total of 47.0 million board feet. In addition to the above revenue and volume, some sales are expected to have pulp removed from sale area. The amount and value of pulp is difficult to predict during planning process but will likely occur in areas of regeneration harvest on steep slopes and whole tree yarding systems. Refer to the attached Financial Summary table and/or Pre Op Reports for more detail on volumes and values.

Summary of Operations by Basin

In the following section, the commercial forest management operations planned for FY10 will be summarized in the context of the 11 management basins (5th field) on the Tillamook District. ODF and ODFW resource specialists reviewed the FY10 operations plan and provided input. This section is a summary of the operations by basin (North to South) and is not meant to completely describe the planned operation. Refer to Appendix B for more detail of each operation.

For FY 2010, trail clearing will not be included as a project in the planned timber sales for most trails. This is a short term change to save expenses.

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

Basin	2010 AOP ²		Cumulative Operations ^{1,2} (FY 02-10)	
	Partial Cut	Regeneration Harvest	Partial Cut	Regeneration Harvest
N. Fork Nehalem	0	0	1060	260
Lower Nehalem	646	678	7,595	6,592
Short Sands	0	0	0	0
Miami	0	0	883	901
Kilchis	0	0	449	1,437
Tillamook Bay	0	0	322	176
Wilson	266	892	2,352	11,423
Tillamook River	0	0	503	67
Trask	200	576	2,280	9,596
Nestucca	0	0	220	287
Little Nestucca	0	0	0	0

1. The Cumulative Operations include all Timber Harvest Operations under the past implementation plan period (July 1, 2001 through June 30, 2009) and the current draft implementation plan period (July 1, 2009 through June 30, 2019). The acres refer to **planned** acres and not harvested or accomplishment acres.

2. These totals do not include alternative sales.

North Fork Nehalem Basin

North Coal (Alt) – This sale is one area totaling 23 acres of partial cut. Area 1 is a 75 year-old stand of western hemlock, Douglas-fir, western red cedar, and a minor component of red alder located in riparian areas. The sale area will have a moderate partial cut reducing the stand basal area to a range of 180 to 200 ft² and a SDI of 29 to 33%. All other conifer and hardwood will be reserved.

Special Concerns: A portion of the sale area is in the Coal Creek SAH.

Lower Nehalem Basin

Clay Tunnel – The sale has four areas and totals 328 acres; 210 acres of partial cut and 118 acres of modified clearcut. Area 1 is a conifer stand of Douglas-fir with a minor component of western hemlock. Area 1 was thinned in 1996 and Area 2 has had little density management. A small portion of Area 1 was thinned in 2003. Areas 2 and 4 are predominantly alder stand with clumps of Douglas-fir which has over-topped the alder by 30-5- feet. Area 3 is an enlarged riparian strip along Clay Creek. Areas 1 and 3 will have moderate partial cuts of SDI 35% and SDI 30%, respectively. Areas 2 and 4 will have a regeneration harvest.

Special Concerns: A cultural resource, a steam donkey, is listed as being located in the northern portion of the sale area. The northern boundary of the sale is adjacent to private ownership.

McPherson Ridge – The sale consists of 4 areas and totals 286 acres; 228 acres of modified clearcut and 40 acres of partial cut.

Area 1 is an alder stand with patches of Douglas-fir and scattered hemlock and spruce. Areas 2 and 3 are Douglas-fir stands with scattered mature hardwoods. These stands have had no prior density management. Area 4 is an enlarged buffer around a Type F stream and associated headwalls and is between Areas 1 and 3. This area is a mix of Douglas-fir and hardwoods, both scattered and in pure clumps.

Areas 1 and 3 will have a regeneration harvest to remove the merchantable alder and slow-growing Douglas-fir. The largest, most vigorous Douglas-fir will be left for green trees along with other conifer and hardwood species.

Areas 2 and 4 will have a heavy partial cut to an SDI of 25%. This will encourage growth on the residual Douglas-fir and other conifer to create a mature forest structure adjacent to the Type F stream and add diversity to the basin.

Special Concerns: Adjacent to Oregon Parks and Recreation Department land. The property boundaries need to be identified in the field.

Montague Ridge – The sale consists of 5 areas and totals 415 acres; 332 acres of modified clearcut and 83 acres of partial cut. Areas 1 and 2 are naturally regenerated alder stands between 55 – 65 years old with scattered Douglas-fir and hemlock. The conifer is primarily located on the ridge tops. Area 3 is a naturally regenerated conifer and hardwood stand approximately 55 years old. The conifer pockets in the stand are overly dense and have had no previous stand management. Areas 4 and 5 are also stands of naturally regenerated conifer and alder. Area 5 has a larger component of alder than Area 4 and the alder in Area 5 was aeri ally sprayed in the 1970s.

Areas 1, 2, 3 and 5 will have the merchantable red alder and Douglas-fir harvested. In Areas 1 and 2, hemlock will be harvested but in Areas 3 and 5 the hemlock will be reserved. Area 4 is a heavy partial cut which will be thinned to a SDI of 22%.

Special Concerns: There is Operationally Limited areas identified in the sale area. Domestic water rights identified at the bottom of Montague Creek.

Fall Ridge – This sale totals 108 acres of partial cut. The sale area is a 57 year old stand of mixed conifer and hardwood. The stand contains legacy conifer trees, mostly in the draws, from the prior stand. The prescription for this stand is a heavy partial cut to remove the merchantable alder and some of the smaller conifer.

Special Concerns: The sale is on a ridge above the Nehalem River and overlooks the Nehalem Falls Campground. There is Operationally Limited areas identified in the sale area.

Helloff Point – This sale totals 205 acres of partial cut. The sale is a 70 year old naturally regenerated stand of Douglas-fir and hemlock with alder intermixed either in patches or scattered throughout the area. This stand will have a moderate partial cut to a SDI of 30-35%. Patches of merchantable alder will be harvested but a component of alder will be reserved across the sale area.

Special Concerns: None.

Waterhouse (Alt) – This sale is a 73 acre partial cut. The stand is a 65 year old mixed conifer and hardwood stand which was naturally regenerated. The prescription for this sale is a heavy partial cut to a SDI of 19-23% which will remove most of the merchantable alder and part of the conifer to encourage growth on the residual conifer.

Special Concerns: There is Operationally Limited areas identified in the sale area.

Short Sands Basin

There are no harvest operations planned in this basin for FY10.

Miami Basin

There are no harvest operations planned in this basin for FY10.

Kilchis Basin

There are no harvest operations planned in this basin for FY10.

Tillamook Bay Basin

There are no harvest operations planned in this basin for FY10.

Wilson Basin

Diamond Point – The sale is comprised of 2 areas totaling 210 net acres of modified clearcut. The sale areas are 50 year old Douglas-fir planted after the Tillamook burn. There is also scattered hemlock and red alder within the stand. The stand growth has slowed and the majority of the Douglas-fir have live crown ratios of 25-30%. The prescription for these areas is to harvest the merchantable alder and Douglas-fir.

Special Concerns: There is Operationally Limited areas identified in the sale area.

North Morris – The sale consists of 2 areas and totals 184 acres of modified clearcut.

The sale areas consist of 45 year old densely stocked Douglas-fir. The stand has had no previous density management and live crown ratios have receded to less than 30%. The prescription is to harvest the merchantable Douglas-fir and red alder. All other conifer and hardwoods will be reserved.

Special Concerns: This sale contains areas of Focused Visual and Recreational designation. There is Operationally Limited areas identified in the sale area.

Phipps Headwaters – The sale consists of 8 areas of partial cut and modified clearcuts totaling 547 acres; 266 acres of partial cut and 281 acres of regeneration harvests. The stands are 55 years old and were regenerated after the Tillamook burn. Portions of the stands were naturally regenerated and portions were planted. Areas 1, 2, 3, 4, 6, 7 and 8 are Douglas-fir stands with scattered other conifer and hardwoods in varying amounts. Area 5 is a stand of mixed Douglas-fir and red alder.

The prescription for Areas 1, 2, 5, and 7 is to harvest the slow-growing Douglas-fir and red alder and reserve all other conifer and hardwoods. The prescription for Areas 4, 6, and 8 is a moderate partial cut the stands to a SDI ranging between 26%-31%. Area 3 will have a heavy partial cut to SDI 25%. This will encourage growth on the dominate conifer and understory development.

Special Concerns: There is Operationally Limited areas identified in the sale area.

Jordan Bound – The sale consists of 2 areas of modified clearcut totaling 217 acres. The stands are 55 years old and were regenerated after the Tillamook burn. Portions of the stands were naturally regenerated and portions were planted and now contain Douglas-fir and red alder in varying densities. The prescription for the sale areas is to harvest the slow-growing Douglas-fir and red alder and reserve all other conifer and hardwoods.

Special Concerns: There is Operationally Limited areas identified in the sale area.

Tillamook River Basin

There are no harvest operations planned in this basin for FY10.

Trask Basin

Alder Joy – The sale is comprised of four areas of modified clearcut totaling 334 acres. The sale areas are primarily Douglas-fir with several pockets of alder (5-20 acres) scattered

throughout the areas. The Douglas-fir in this area has moderate to severe symptoms of Swiss needle cast and poor live crown ratios. The alder was aerially sprayed in the 1970's to release the planted conifer resulting in short boles and many tops.

All sale areas will harvest alder and Douglas-fir. All other species will be reserved within the sale area boundary.

Special Concerns: None

Clear Hembre – The sale consists of 5 areas of partial cut and modified clearcut totaling 442 acres; 200 acres of partial cut and 242 acres of clearcut. Area 1 is a stand of mixed Douglas-fir and alder, Area 2 is a hardwood stand, and Areas 3,4, 5, and 6 are Douglas-fir stands . The Douglas-fir in all of the stands is slow growing with varying amounts of live crown. The Douglas-fir stands with 40% or more live crown will be partial cut (Areas 3, 5, and 6) and the hardwood stands and Douglas-fir stands with 30% or less live crown will be clearcut. All other conifer species will be reserved.

Special Concerns: There is Operationally Limited areas identified in the sale area. The sale area also contains several OHV trails.

Pothole (Alt)– This sale consists of 6 harvest areas totaling 392 acres of clearcut, both modified clearcuts and retention cuts. The sale is part of a paired watershed study area and is designed to evaluate the effect of clearcut harvest on water quality. The prescriptions were predetermined by the study. The stands are 40-60 year old Douglas-fir or Douglas-fir/red alder stands of moderate densities. Areas 1, 3, and 4 will be modified clearcuts and Areas 2, 5, and 6 will be retention harvests of 35 ft² in order to treat the entire sub-basin.

Special Concerns: The historic Toll Road is located on the eastern part of Area 2.

Zig Zag Alder (Alt) – This sale consists of 2 areas totaling 125 net acres of modified clearcut. The sale areas consist predominately of Douglas-fir with red alder scattered throughout in various arrangements and densities. The stand has had no prior density management and the overall growth of the stand is low. The stand has symptoms of SNC and the alder is deformed from herbicide sprayed in the 1970s. The prescription for this stand is to harvest toe Douglas-fir and red alder and reserve other conifer and hardwoods.

Special Concerns: There is Operationally Limited areas identified in the sale area. The sale area also contains an OHV trail along the ridge top.

Nestucca Basin

Moon Creek (Alt) – This sale consists of 2 areas totaling 116 acres; 47 acres of partial cut and 69 acres of modified clearcut. Area 1 is a stand of red alder and mixed conifer. The stand is 80 years old and the alder is deteriorating. The prescription is to harvest the alder and some of the conifer, leaving some of the conifer pockets for legacy trees in the new stand. Area 2 is a 40 year old Douglas-fir plantation with hemlock and cedar scattered throughout. The prescription for this area is a moderate partial cut to release the Douglas-fir and encourage continued growth.

Special Concerns: Area 2 is within 1.5 miles of a northern spotted owl activity center. A preliminary Biological Assessment has been prepared for this sale.

Little Nestucca Basin

There are no harvest operations planned in this basin for FY10.

Forest Roads Management

Overview

The FY10 AOP includes approximately 12.12 miles of new road construction (predominately low use spurs) and 7.61 miles of road improvement. In addition, 9.5 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.

Most noxious or invasive weeds are along roads and have spread into plantations. The main sources for the weeds are car tires and equipment moved in and out of district and

where soil disturbance occurs. The Reforestation Unit currently has the lead on noxious weed control however road management has responsibilities toward the problem as well. 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	Collector	Spur
	AOP	AOP	AOP
Road Construction	0	0	12.12
Road Improvement	0	0	7.61
Road Closure/Vacation	0	0	9.5
Road Maintenance – District¹	2	25	50
Road Maintenance – Active Operations²		48	1.5

1. The road maintenance estimates include only the work to be completed during Fiscal Year 2010 by the district road crew or service contract. Estimates of road maintenance were not made in the Implementation Plan.

2. 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.

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. Abandoned roads are roads built during the Tillamook Burn salvage operations and then abandoned. Improvement of Abandoned 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 Abandoned roads. Existing roads have been improved and maintained over the years through timber sales or the district road crew. Abandoned roads are roads built during the Tillamook Burn salvage operations and then abandoned. For work on an abandoned road to be considered road improvement the abandoned road must have a defined roadbed but may be overgrown with shrubs and trees less than 5 inches in

diameter. Abandoned 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. Road closure will be accomplished by pulling culverts and blocking access. Road vacation will pull culverts, recontour the cut banks and obliterate roadbeds. In this AOP, approximately 1 mile 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.

Since FY 05 temporary road closures occur in the Trask and Wilson basins during the October to November hunting seasons. This project is completed in partnership with ODFW and Oregon Hunter's Association (Tillamook Chapter) to install and close gates. This project has continued and expanded in each of the last three fiscal years. This project continues to be reviewed each year in consultation with ODFW and Oregon Hunter's Association (Tillamook Chapter) to determine any changes, expansion or reduction.

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 7.7 miles of property line for seven sales planned for FY09. 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 Sheridan Butte sale area.

Twenty-five 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 FY10. 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): The burning in the fall of large landing piles to reduce fuel loading, down slope hazards and open ground for planting. One 65 acre unit will be broad cast burn this summer for fire training purposes.

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 3000 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 360 trees per acre on all clearcut areas, both modified clearcuts and retention cuts. Initial plant species will consist of western hemlock 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 3,329 acres of initial planting (over 1,000,000 seedlings).

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 200 trees per acre. The current estimate is 250 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: Units or portions of units will be assessed prior to planting. Natural regeneration will be considered primarily in western hemlock stands that have been salvaged from the December 2008 wind storm or 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 350 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 100 acres. The actual plan will be developed in late spring or early summer when brush is more developed and actual needs can be assessed.

Noxious Weeds: Reforestation is working with the Tillamook Estuary Project and other partners to map and eradicate knotweed. Other species such as Himalayan blackberry, false brome, and Scotch broom are targeted for control totaling approximately 20 acres during the fiscal year.

Tree Protection

The objective is to reduce browse by elk, deer, and rodents allowing trees to attain full height growth potential. No new installations of tree protection barriers are planned for this year. Crews will perform maintenance on existing tree protection areas.

Trapping: The current estimate is 5000 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 2010 the Tillamook District Recreation Program will operate and maintain existing facilities and trails at the current high standards.

An emphasis will be put on finding efficiencies in operations and locating additional sources of funding to maintain the recreation program (facilities and services during this

poor economic environment and tightening budgets. The Tillamook District will seek to increase volunteer efforts on the local level to assist in trail maintenance, trash cleanup and forest patrol. In addition, the timber sales in the FY2010 sale plan will not include trail clearing as part of the project work as they have in the past for many trails. Major trails will be identified and cleared but most trails will rely on volunteer efforts to clear after harvest.

ODF has recently formed a Recreation Leadership Group to implement the 2008 Recreation Action Plan. The action plan was developed in response to the results of the 2nd Party Assessment, an review of the recreation program contracted by ODF, which identified gaps in management, comprehensive planning, and areas for improvement in operations. The Tillamook District will be helping to implement the Action Plan throughout FY 2010 under the Leadership groups' guidance.

Over the last year the Recreation Unit in the Tillamook District underwent a change in staffing and restructuring to include the position of "Recreation Planner". The Recreation Planner will work to further integrate recreation with other forest management activities. This approach will help the Tillamook District find the "Greatest Permanent Value" (GPV) for social use of the forest. The GPV is a forest management philosophy mandated by Oregon law and described in the agencies 2001 NW Oregon Forest Management Plan.

Facilities Improvement

Keenig Day Use Area:

Open for use as a fee based campground for FY 2010. Improvements include 12 "walk in" camp sites with picnic tables and fire grates, increased parking capacity and installation of an information kiosk.

Improvement to the bathrooms may occur if funding is available.

Diamond Mill:

Diamond Mill will be changed to a fee based OHV campground starting sometime in FY 2010. This change will help the Tillamook District align with existing Administrative Rules that mandate a fee for overnight camping on forest lands. Day use of Diamond Mill will not incur a fee.

Other plans include for the parking lot to be graded and rocked. Improvements to the bathroom facilities are contingent of funding.

Recreation Planning

Tillamook Districts planning efforts through FY 2010 include:

- Reviewing FY 2011 planned timber sales and providing input and recommendations to avoid or mitigate impacts on the recreation program and infrastructure.
- Recruitment of local volunteers for trail maintenance, construction, trash cleanup, and patrol.
- Seeking funding sources to maintain or improve recreational facilities on the forest
- Finding ways to increase efficiency in operations and trail maintenance.

Wilson River Restoration Project

This project began in FY 09 and is a combination of excavation work and blocking will limit vehicle access to 16 sites between the Wilson River on the north side of Highway 6 from milepost 14 to milepost 27.

These sites were selected because they are highly impacted by improper vehicle use, trash dumps, site hardening, and illegal activities. The work being done will still allow for walking access to the river for fishing, swimming, and boating.

Through FY 2010:

- Rehab and planting of shrubs and trees in these sites
- Planning efforts to locate opportunities for “designated walk in campsites” along the river.

Non Designated Dispersed Camping Sites

Tillamook District will continue Global Positioning System (GPS) inventory and evaluation of all non-designated camping sites forest wide. Considerations include: The camp site’s impact to natural resources, proximity to streams, fire hazard potential, and public safety. Consideration will be given to site feasibility as a safe and appropriate place to camp. The purpose of the site evaluation is to determine whether or not the camp site should be elevated to “designated” status and maintained, or closed off to use. The GPS data will also be used to create a user friendly map for the public. The maps will inform forest users the location of “designated” dispersed sites and will be available FY 2010.

“Designated dispersed campsites” are signed and include a metal fire ring for campfires. Campfires are allowed during fire season in designated sites only.

Facilities Maintenance

The following is a list of the facilities to be maintained during the FY 2010 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 – Memorial Day through Labor Day.
- 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 – Open year round
- Peninsula Day Use Area & Boat Launch – Open year round
- Stones Road Boat Ramp – Open year round
- 65 designated dispersed campsites through-out forest
- Smith Homestead – Open year round (shared maintenance responsibility with Tillamook Forest Center)

Non-Motorized Trail Construction

Coal Creek Trails – Continued construction of the Cook Creek trail is dependent on volunteer participation for FY 2010.

Non-Motorized Trail Maintenance

A total of 19.3 miles of trail maintenance is planned. Annual trail work includes bridge inspection, brushing, slough removal, grade repair, and removal of wind throw. The work will be done by South Fork inmate crews, volunteers and recreation staff.

Unforeseen winter storm events sometimes cause damage that requires more than regular trail maintenance. Types of serious potential storm damage included complete bridge failure, massive slides, and large tree blow down. Sections of trail to be maintained FY 2010:

- 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 - 0.4 mile
 - Coal Creek Trail - 1.4 miles
- Valley View Trail – 0.5 mile

Motorized Trail Construction

Construction of trail re routes to better connect the trail system, move trails off roads, and improve rider safety will be a priority. Some trail construction is needed in the Diamond Mill and Jordan Creek areas to improve rider safety by getting Off Highway Vehicles (OHV) off mainline haul roads. New trails also disperse use away from the staging areas and improve the rider experience by increasing trail mileage. In addition, a contract to provide a professional engineer inspection of all trail bridges in the district is being developed as funding is available. Bridges inspections may occur over the next 3-5 years to complete the entire district and a standard scheduled developed. See Table below for more detail.

Motorized Trails Maintenance and improvement

Maintenance and upgrade of OHV trails district wide will be a priority throughout FY 2010. Ongoing survey of established OHV trails will be done by district staff and volunteers.

The purpose for surveying trails is to identify trail erosion and other resource or safety issues that may need correcting. Work includes rocking, rolling grade dips, bridge construction, culverts and installation of lower gradient re-routes. Seasonal closure of specific trails is sometimes necessary to preserve the sustainability of the trail during the wet season. Temporary closure of trails may also occur due to timber cutting activity or other forestry practices. These closures are for the safety of the recreating public. For trail or road closures please refer to the agency website.

Tillamook District Motorized Trail Projects Fiscal Year 2010

Trail Project listed by priority	Project Trail Mileage	Resources to Accomplish Work*	Description of work
1) Diamond Mill Road bypass	Approx 3 miles	OHV TC, S. Fk.	New quad, motorcycle trail layout from Diamond Staging Area to Diamond Mill ridge top, route will bypass road and utilize viable existing routes. <i>Project improves rider safety, increases mileage, and gets OHV off of roads.</i>
2) Mad Dogs Pumpkin Patch	4 miles	OHV TC	Motorcycle trail re route on bench. Trail will run adjacent to new road construction and cross road

			only when necessary <i>Project restores trail mileage lost to road construction, increases trail mileage, & disperses use from Jordan Cr. Staging Area</i>
3) Leroy's Log Jam	0.95 mile	OHV TC	Re-shape and grade trail, install OHV dips, improve trail filters
4) Rogers Road Tie	½ mile	OHV TC, Volunteers	New quad/motorcycle trail to connect Rogers Rd. 4WD Trail to 1 st bridge over Jordan Cr. at dispersed sites – <i>project improves rider safety, increases mileage, and gets OHV off of mainline road.</i>
5) Kristie's Shuttle	68' steel bridge, 1000' of new trail construction	Design build contract funded in part by ATV grant, OHV TC	<ul style="list-style-type: none"> • Write and obtain approval of ATV grant • Write contract • put out for bid & award • Administer contract <p><i>Project protects fish stream from OHV impacts and links Boundary Road area to Ginsberg Pt. trails. Bridge site is next to boundary of important watershed study area.</i></p>

*OHV TC – Off Highway Vehicle Trail Crew (2 equipment operators)
S. Fk. – 10 man South Fork Inmate Crews
Volunteers – ODF sponsored work parties, adopt-a-trail, and club work parties
TRC – Tillamook District Road Crew

Other Management Activities

OHV Trail Inventory

In Fiscal Year 2010, ODF will continue GPS trail inventory work in the Trask Basin and Jordan Creek areas. Trail inventory work and upgrades to the Geographic Information System trail layer for the district will continue through FY 2010 with current staff levels and workloads. Information gathered in the assessment process will support the development of a long range trail plan for the entire Tillamook State Forest. Inventorying undocumented trails for long range trail planning is a goal of the agency's Recreation Action Plan.

Organized Event Administration

For FY 2010 Tillamook District will administer permits for motorized events on the Tillamook State Forest. Events include poker runs, races, 4WD runs, dual sport runs, and observed motorcycle trials. There are 16 planned motorized events in the 2009/2010 season and at least one non-motorized event.

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 rd 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 nd Saturday of month, March – October. Estimate 400 hours per year
North Coast Travel Management Area	1 – 2 volunteer	Est. 500 hours per year
Down by The Riverside Clean Up - SOLV	5 – 10 volunteers	Est. – 40 hours

Law Enforcement

ODF will continue to contract with Tillamook County Sheriffs Office for 3 full-time deputies at an approximate cost of \$292,655. The Tillamook County Sheriff's Office

funds 49% of the program cost with grant funds from the Oregon ATV Fund. The remaining 51% is provided by Oregon Department of Forestry.

Forest deputies enforce state, federal, and forest recreation laws with an emphasis on ATV enforcement as they patrol the forest. Deputies also provide search and rescue services as needed. Chapter 477 fire laws pertinent to recreation use are enforced by county deputies, fire protection and recreation staff. Please refer to our forest information boards or contact the forestry office for a list of applicable recreation and fire laws.

North Coast Travel Management Area

For the last nine years the district has participated in the Oregon Department of Fish and Wildlife (ODFW), North Coast Travel Management Area (TMA). The TMA on the Tillamook State Forest is located on the North end of the forest in the God's Valley area.

The TMA regulates vehicle travel during the general deer and elk seasons to reduce road damage, increase bull/buck escapement and provide "walk in only" hunting opportunities. Tillamook District will continue this partnership with ODFW through 2010. 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 and County Deputies on a limited basis. Additional roads may be closed to vehicle travel for the 2010 hunting season. Check with the ODF or ODFW offices for a current map of "walk in only" roads in the God's Valley Area.

Other Business

- Coordinate removal of abandoned vehicles and property, clean up dumpsites, and respond to other social impacts on forest resources.
- Provide support for interpretive and educational programs at Tillamook Forest Center, local schools, and at other ODF districts.
- Act as 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 Steel Headers).

Land Exchange

No land exchanges are planned during the FY10, however the district is beginning work on future exchange priorities. The overall goal is to develop exchange plans for the Common

School Lands and any high priority parcels Tillamook District would like to acquire. High priority would be parcels that have implications for access to other lands.

Other Integrated Forest Management Operations

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, bear grass, 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 FY09, 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

Tillamook District continues to be inventoried using the Stand Level Inventory (SLI) protocol and is administered by Salem staff. Currently 620 stands have had SLI measurements equating to approximately 12% of the district. An additional 100 stands have been complete resulting in approximately 15% of the district area being measured. There are currently 5759 SLI stands in Tillamook, amounting to 252,337 acres. About 5150 stands and 242,057 acres are suited for SLI cruising.

Permanent plot remeasurements were started in FY09 on the district but have been put on hold because of reduced revenues.

The district will also conduct 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 (MMMA).

Northern Spotted Owl Surveys

In FY10 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

Operation	Species (NSO/MM)*	Status
Clay Tunnel	NSO	2008/2009
Clear Hembre	None Req.	
Diamond Point	None Req.	
Fall Ridge	NSO/MM	2008/2009
Hellhoff Point	NSO	2008/2009
Jordan C	None Req.	
McPherson Ridge	NSO	2008/2009
Montague Ridge	NSO/MM	2008/2009

Moon Creek	NSO/MM	2009
North Morris	None Req.	
Phipps Headwaters	None Req.	
Pothole	NSO	2009
Waterhouse	NSO	2008/2009
Zig Zag Alder	None Req.	
Alder Joy (Alternate)	None Req.	
North Coal (Alternate)	NSO/MM	2008/2009

*NSO is Northern Spotted Owls

*MM is Marbled Murrelet or TBD (to be determined)

*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. No known locations were identified. .

Watershed Analysis

Watershed Analyses are complete for the Trask, Miami, and Wilson basins. The program is taking the opportunity to review the work completed to this point on State Forests before beginning new projects. Sales have been checked with watershed analysis recommendations and developed Action Plans to identify areas recommended for improvement. Stream enhancement projects will not be pursued in this operations plans but road improvement work in the sale areas or along the haul routes will be addressed or seasonal restrictions will be applied to mitigate watershed concerns.

Transportation Planning

FY 10 will begin to implement the template for Transportation Planning developed during FY08-09 pilot project in the Wilson Basin. The transportation plan will show existing roads and their conditions, identify future plans for access onto State Forest land, and the work required to accomplish the plan. Stand inventories will also be used to evaluate access needs. Road costing tables are being developed to assist with road building and project work priorities.

Research and Monitoring

The Tillamook District will be involved in a variety of research and monitoring projects in FY09. Study sites and plots will be maintained on the district. District employees may participate in these projects. The following sections provide brief summaries of current research.

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.

Influence of Mineral Nutrition on Susceptibility and Recovery of Planted Seedlings to Animal Browse: (ODF and Purdue University)

The purpose of this study is to assess the response of Douglas-fir, western hemlock, and western red cedar to manipulation of plant nutrient content. Seedlings will be consistently monitored over a five-year period for growth, foliar nutrient and monoterpene levels, and susceptibility and recovery from animal browse. Relationships between browse susceptibility, recovery, and fertilization treatments will be thoroughly quantified.

Animal Damage in Plantations: (ODF)

The formal study compares various stock as they relate to controlling/preventing animal damage. The study will look at various stock types and sizes for economic investments 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.

Intensive Watershed Monitoring: (ODF, Weyco, OSU, BLM)

ODF State Forests Monitoring Program is working on a project in the Trask River to evaluate if upland, riparian, and aquatic management strategies are effectively achieving goals for riparian and aquatic resources. The goal of the Trask River Watershed Study is to understand how aquatic systems, particularly small headwater stream, respond to harvest and if harvest effects are transferred to downstream fish bearing reaches. The overall objectives are to determine:

- The effects forest harvest have on the physical, chemical and biological characteristics of small headwater streams;
- The extent to which alterations in stream conditions caused by harvest along headwater channels influence the physical, chemical and biological characteristics of downstream fish bearing streams.

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 have been sampled using a combination of field-based sampling and document review methods. Implementation monitoring may be suspended during this period of reduced revenue.

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*)

Marbled Murrelet Effectiveness Monitoring: (ODF State Forests Program) The marbled murrelet (*Brachyramphus marmoratus*) is a small seabird that forages in the ocean but nests in conifer forests with older forest structure up to 55mi inland. Due to declining populations, it was federally listed as a threatened species in Washington, Oregon and California in 1992. Both known and potential nesting habitat occurs within state forests managed by ODF. ODF currently has no Habitat Conservation Plan (HCP) for lands in northwest Oregon and thus manages these lands under a take avoidance strategy. Management activities consistent with this strategy are described in the State Forest Program Marbled Murrelet Operational Policies (ODF, 2005) and Marbled Murrelet Guidance Document (ODF, 2004). These documents describe surveying requirements, the establishment of Marbled Murrelet

Management Areas (MMMA) in areas in which murrelets have been detected, and allowable operational practices within MMMA once established.

Some MMMA have potential murrelet nesting habitat within them that is not yet suitable because further growth of potential nest trees is necessary. ODF has undertaken selective thinning regimes to encourage this growth to occur more rapidly than would be expected if the stands remained unthinned.

The effectiveness of strategies to maintain currently occupied habitat and improve unoccupied habitat have not definitively been measured. The goal of this project is to do so.

Other Planning Operations:

During the Fiscal Year 2010, the Planning Unit will complete more specific sub-basin (6th order watersheds) short term and long term planning. The number of measured Stand Level Inventory (SLI) stands has increased by 100 stands which will help the district analyze stand information, structural components (down wood and snags) with more certainty. The district is also able to review the data in conjunction with on-going transportation planning, watershed analysis data, and updated stream survey information. The SLI collection contract has been suspended due to budget reductions and the district will not be able to collect any further inventory during FY 2010.

The overall goals of the sub-basin planning are multiple in scale and detail. The highest priority is to develop a pool of candidate stands for management. Second goal is to identify areas that are not available for management and determine if the limitation is site, access costs, or general topography. Another goal is use the sub-basin plans and information to review and suggest changes to the district Desired Future Condition and Landscape Design. The planning effort will inform day to day decisions as well as prepare information for Implementation Plan review.

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 FY10 Annual Operations Plan. District personnel will participate when possible 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, near mile post 22 on the Wilson River Highway. 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 including many school groups; access to the river by interpretive trails; continued but minor management activities in the demonstration forest. The Center is expected to host more than 50,000 people per year, generating a large amount of automobile traffic at the site. The Smith Homestead Day Use Area, located ½ mile east of the Center, will also host many school groups, family activities, and other visitors. The Tillamook Forest Center will be closed during the fall and winter for FY 2010.

Administration

There are 34 permanent positions on the Tillamook District responsible for implementing the 2010 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 two forest management units (Planning and Timber Contracts) 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 Planning unit prepares the Annual Operations Plan and the Pre-Operations Reports for the individual sales in the AOP and administers contracts for T&E surveys and cruising. The Planning unit is also responsible for identifying candidates for future sale plans five to ten years into the future and other planning efforts like land exchange and transportation planning. The Timber Contracts unit completes field work and contract preparation as well as administers all of the timber sale contracts for the district. The unit also 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 2008 Recreation Action Plan* 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.

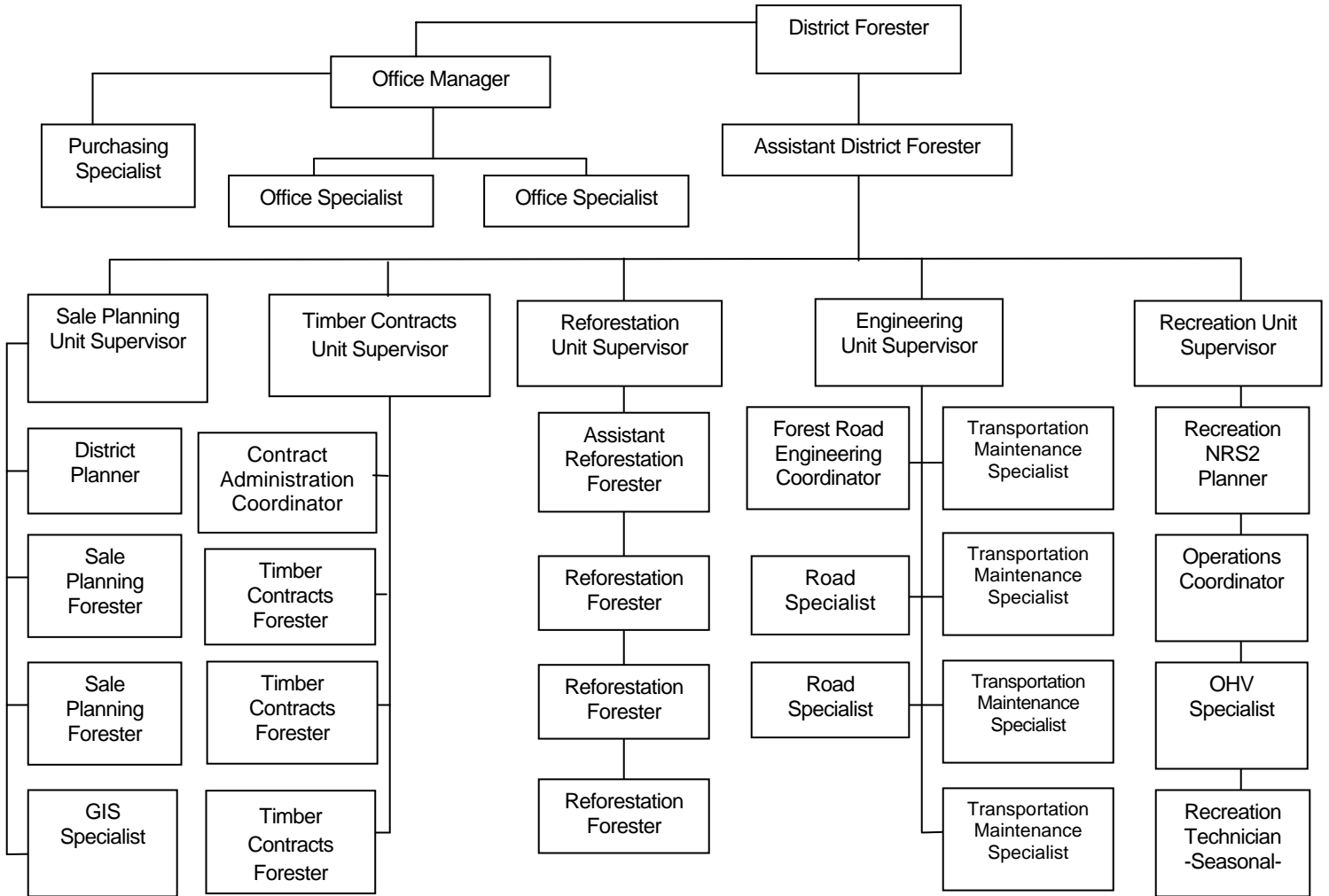
Administration consists of the District Forester, Assistant District Forester, Office Manager, Purchasing Specialist, and two Office Specialists. The District Forester and Assistant District Forester provide policy direction, budget development, and oversight to the field units.

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 but is managed through the planning unit. 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.

Tillamook District Organization Chart



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

TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: Tillamook

Fiscal Year: 2010

Date:

06/24/2009

Operation	Payment Type	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value			% Project Work
		BOF	CSL			Partial Cut	Clear-cut	Con-ifer	Hard-woods	Total	Gross	Projects	Net	
Alder Joy	R	100%	0%	Till	4	0	334	2.7	1.2	3.9	\$ 447,200	\$ 32,257	\$ 414,943	7%
Clay Tunnel	R	100%	0%	Till	1	210	118	4.1	1.1	5.2	\$ 615,275	\$ 36,205	\$ 579,070	6%
Clear Hembre	R	100%	0%	Till	3	200	242	4.3	0.3	4.6	\$ 439,300	\$ 37,496	\$ 401,804	9%
Diamond Point	R	100%	0%	Till	4	0	210	1.6	0.6	2.2	\$ 254,100	\$ 32,695	\$ 221,405	13%
Fall Ridge	R	100%	0%	Till	2	108	0	0.1	1.2	1.3	\$ 212,050	\$ 13,972	\$ 198,078	7%
Helloff Point	R	100%	0%	Till	4	205	0	1.0	1.4	2.4	\$ 253,498	\$ 90,414	\$ 163,084	36%
Jordan Bound	R	100%	0%	Till	1	0	217	3.9	0.3	4.2	\$ 541,600	\$ 143,116	\$ 398,484	26%
McPherson Ridge	R	100%	0%	Till	2	40	228	1.8	2.4	4.2	\$ 620,875	\$ 167,795	\$ 453,080	27%
Montague Ridge	R	100%	0%	Till	3	83	332	2.8	3.0	5.8	\$ 807,450	\$ 214,630	\$ 592,820	27%
North Morris	R	100%	0%	Till	1	0	184	4.2	0.7	4.9	\$ 655,825	\$ 107,870	\$ 547,955	16%
Phipps Headwater	R	100%	0%	Till	1	266	281	7.9	0.4	8.3	\$ 750,375	\$ 329,727	\$ 420,648	44%
Total:						1,112	2,146	34.4	12.6	47.0	\$ 5,597,548	\$ 1,206,177	\$ 4,391,371	22%

Alternate Operations

Waterhouse	R	100%	0%	Till		73	0	0.1	0.6	0.7	\$ 91,800	\$ 10,098	\$ 81,702	11%
North Coal	R	100%	0%	Till		23	0	0.5	0.0	0.5	\$ 25,200	\$ 4,900	\$ 20,300	19%
Moon Creek*	R	100%	0%	Till		47	69	0.9	0.3	1.2	\$ 154,825	\$ 20,695	\$ 134,130	13%
Zig Zag Alder	R	100%	0%	Till		0	125	1.3	0.2	1.5	\$ 198,350	\$ 49,067	\$ 149,283	25%
Pothole*	R	100%	0%	Till		0	392	3.2	0.1	3.3	\$ 374,175	\$ 85,423	\$ 288,752	23%
Total:						143	586	6.0	1.2	7.2	\$ 844,350	\$ 170,183	\$ 674,167	20%

* First yr of surveys 2009

2008 Planned Sales

Cougar Camp	R	100%	0%	Till		528	80	6.8	0.8	7.6	\$ 673,550	\$ 450,000	\$ 223,550	67%
Runyon Ex	R	100%	0%	Till		253	117	4.7	1.4	6.1	\$ 862,250	\$ 370,000	\$ 492,250	43%

TIMBER HARVEST OPERATIONS - FOREST STRUCTURE SUMMARY

District: **Tillamook** Fiscal Year: **2010** Date: **24-Jun-09**

Operation	Area	Net Acres			Stand Structure Development Pathway			Structural Components
		Clearcut	Partial Cut	Total	Current	Post-Harvest	Desired	Green Trees/acre
Lower Nehalem								
Clay Tunnel	1	0	196	196	UDS	UDS	GEN	
	2	84	0	84	UDS	REG	GEN	5
	3	0	14	14	UDS	UDS	GEN	
	4	34	0	34	UDS	REG	GEN	5
Fall Ridge	1	0	108	108	UDS	UDS	GEN	
Helloff Point	1	0	205	205	UDS	UDS	67%OFS 25% LYR 8% GEN	
McPherson Ridge	1	120	0	120	UDS	REG	GEN	5
	2	0	4	4	UDS	UDS	GEN	
	3	108	0	108	UDS	REG	GEN	5
	4	0	36	36	UDS	REG	GEN	5
Montague	1	120	0	120	UDS	REG	GEN	5
	2	57	0	57	UDS	REG	GEN	5
	3	57	0	57	UDS	REG	GEN	10+
	4	0	83	83	UDS	UDS	OFS	
	5	98	0	98	UDS	REG	GEN	5
Wilson								
Clear Hembre	1	1	0	1	UDS	REG	GEN	5
	3	0	2	2	UDS	UDS	50% GEN 50% OFS	
	5	0	1	1	UDS	UDS	OFS	
	6	0	3	3	UDS	UDS	OFS	
Diamond Point	1	101	0	101	UDS	REG	GEN	5
	2	109	0	109	UDS	REG	GEN	5

Jordan Bound	1	97	0	97	UDS	REG	GEN	5
	2	120	0	120	UDS	REG	GEN	5
North Morris	1	74	0	74	UDS	REG	99% GEN 1% LYR	5
	2	110	0	110	UDS	REG	GEN	5
Phipps Headwater	1	120	0	120	UDS	REG	GEN	5
	2	117	0	117	UDS	REG	GEN	10+
	3	0	67	67	UDS	UDS	GEN	
	4	0	19	19	UDS	UDS	GEN	
	5	17	0	17	UDS	REG	GEN	5
	6	0	101	101	UDS	UDS	GEN	
	7	27	0	27	UDS	REG	GEN	5
	8	0	79	79	UDS	UDS	GEN	
Trask								
Alder Joy	1	13	0	13	UDS	REG	GEN	5
	2	99	0	99	UDS	REG	GEN	5
	3	131	0	131	UDS	REG	GEN	5
	4	91	0	91	UDS	REG	GEN	5
Clear Hembre	1	119	0	119	UDS	REG	GEN	5
	2	8	0	8	UDS	REG	GEN	5
	3	0	118	118	UDS	UDS	36% GEN 64% OFS	
	4	114	0	114	UDS	REG	70% LYR 30% OFS	10+
	5	0	13	13	UDS	UDS	OFS	
	6	0	63	63	UDS	UDS	37% GEN 63% OFS	
Total		2146	1112	3258				

FOREST ROADS SUMMARY

District: Tillamook

Fiscal Year: 2010

Date: 06/24/2009

Operation	Construction		Improvement		Other Projects	Total Project Costs	Gross Value of Operation	Total Cost as a percent of Gross Value
	Miles	Cost	Miles	Cost				
Alder Joy	0.4	\$4,900	0.6	\$27,357	none	\$ 32,257	\$ 447,200	7.2%
Clay Tunnel	0.87	\$ 10,440.00	0.55	\$ 14,500.00	none	\$ 36,205	\$ 615,275	5.9%
Clear Hembre	1.97	\$ 31,746.00	0	\$ -	none	\$ 37,496	\$ 439,300	8.5%
Diamond Point	0.57	\$ 29,045.00	0	\$ -	none	\$ 32,695	\$ 254,100	12.9%
Fall Ridge	0.4	\$ 3,622.00	0.65	\$ 10,350.00	none	\$ 13,972	\$ 212,050	6.6%
Helloff Point	1.52	\$ 47,843.00	2.1	\$ 42,571.00	none	\$ 90,414	\$ 253,498	35.7%
Jordan Bound	1.19	\$ 143,116.00	0	\$ -	none	\$ 143,116	\$ 541,600	26.4%
McPherson Ridge	1.44	\$ 167,795.00	0	\$ -	none	\$ 167,795	\$ 620,875	27.0%
Montague Ridge	1.31	\$ 183,617.00	0.66	\$ 19,375.00	none	\$ 214,630	\$ 807,450	26.6%
North Morris	2.1	\$ 107,870.00	0	\$ -	none	\$ 107,870	\$ 655,825	16.4%
Phipps Headwater	2.32	\$ 255,200.00	1.33	\$ 74,527.00	none	\$ 329,727	\$ 750,375	43.9%

Total:	\$1,206,177	\$5,597,548	21.5%
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Alternate Operations								
Waterhouse	0.8	\$ 10,098.00	0	\$ -	none	\$ 10,098	\$ 91,800	11%
North Coal	0.2	\$ 4,900.00	0	\$ -	none	\$ 4,900	\$ 25,200	19%
Moon Creek	0.74	\$ 6,600.00	0	\$ -	none	\$ 20,695	\$ 154,825	13%
Zig Zag Alder	0.77	\$ 37,785.00	0.46	\$ 11,282.00	none	\$ 49,067	\$ 198,350	25%
Pothole	0.99	\$ 39,160.00	1.98	\$ 31,363.00	none	\$ 85,423	\$ 374,175	23%

\$ 170,183	\$ 844,350	20%
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Reforestation and Young Stand Management Report

District: Tillamook

Fiscal Year: 2010

Date:

03/24/2009

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*	3,329	\$270.00	\$898,830.00	80	\$270.00	\$21,600.00	3,409	\$920,430.00
Interplanting*	250	\$225.00	\$56,250.00	50	\$225.00	\$11,250.00	300	\$67,500.00
Underplanting	0		\$0.00			\$0.00	0	\$0.00
Tree Protection-Barriers**	0	\$0.00	\$0.00		\$0.00	\$0.00	0	\$0.00
Tree Protection-Direct Control	5,000	\$65.00	\$325,000.00	300	\$65.00	\$19,500.00	5,300	\$344,500.00
Site Prep-Chemical- Aerial	2,900	\$70.00	\$203,000.00	80	\$70.00	\$5,600.00	2,980	\$208,600.00
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***	0		\$0.00			\$0.00	0	\$0.00
Release-Chemical- Aerial	0	\$60.00	\$0.00	80	\$60.00	\$4,800.00	80	\$4,800.00
Release,-Chemical-Hand	100	\$115.00	\$11,500.00		\$115.00	\$0.00	100	\$11,500.00
Release-Mechanical-Hand	350	\$115.00	\$40,250.00		\$115.00	\$0.00	350	\$40,250.00
Precommercial Thinning	400	\$200.00	\$80,000.00		\$200.00	\$0.00	400	\$80,000.00
Pruning	0		\$0.00			\$0.00	0	\$0.00
Other: Stocking Surveys	0	\$0.00	\$0.00		\$0.00	\$0.00	0	\$0.00
Totals	12,329	--	\$1,614,830.00	590	--	\$62,750.00	12,919	\$1,677,580.00

*Planting costs include all costs including seedlings

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

***Noxious Weed work is being completed through cooperative agreement with Tillamook Estuary Partnership.

RECREATION MANAGEMENT SUMMARY

District: Tillamook

Fiscal Year: 2010

Date Filled Out: 03/24/2009

Operation	Unit of Measure	Current	Construction Projects	Construction Cost (Funding)		Improvement Projects	Improvement Cost (Funding)		Total Cost*	Comments
				ODF	Other		ODF	Other		
Facilities										
Campsites	Sites	68	Keenig Campground bathrooms	\$ 8,000.00	\$22,000				\$30,000	depends on obtaining grant
Desig.Disp.Campsites		50				Wilson River Restoration Project	\$ 43,643	\$34,579	\$78,222	the majority of the work
Day Use Areas		7							\$0	will be done by end of FY09.
Trailheads		5							\$0	This reflects total project cost.
Interpretive Sites		2							\$0	
OHV staging areas	Sites	1	Diamond Mill bathrooms	\$ 16,000	\$44,000				\$60,000	depends on obtaining grant
Trails										
Non-Motorized	Miles	12.8							\$0	
Motorized	Miles	120							\$0	

*cost were included only for projects requiring funding from outside ODF.

Total: \$168,222

SALMON ANCHOR HABITAT HARVEST SUMMARY

District: Tillamook

Fiscal Year: 2010

Date: June-09

SAH Basin Name	Total Acres in Basin	Total Harvest (Partial Cut & Regeneration)				Regeneration			
		Allowable Percent ¹	Allowable Acres	Acres in AOP 10	Acres to Date ²	Allowable Percent ¹	Allowable Acres	Acres in AOP 10	Acres to Date ²
Ben Smith Creek	3,977	15	597	0	415	10	398	0	365
Cedar Creek	7,214	NA	--	0	1,525	25	1,803	0	1,129
Coal Creek	1,052	NA	--	0	240	25	263	0	148
Cook Creek	18,862	NA	--	0	3,459	25	4,715	0	2,068
E Fork S Fork Trask	15,627	NA	--	0	2,711	25	3,906	0	2,240
Elkhorn ^{4,5}	4,240	15	636	0	614	10	424	0	287
Foley Creek	4,403	15	660	0	253	10	440	0	24
Little N Fork Wilson	10,310	NA	--	0	1,716	16	1,649	0	1,622
Miami	13,910	NA	--	0	1,419	12	1,669	0	511
Middle Kilchis	14,155	15	2,123	0	413	10	1,415	0	408
S Fork Salmonberry ⁴	3,536	15	530	0	23	10	353	0	23

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.