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ASTORIA DISTRICT

2010 ANNUAL OPERATIONS PLAN

INTRODUCTION

This Annual Operations Plan (AOP) for the Astoria District describes operations, activities and projects designed to achieve the goals, strategies, and objectives of the Astoria District Implementation Plan, Astoria District Recreation Plan, Northwest Oregon State Forests Management Plan, and portions of the (Draft) Western Oregon Habitat Conservation Plan. It covers the time period from July 1, 2009, through June 30, 2010.

All proposed operations are designed to conform to the Oregon Forest Practices Act and Forest Management Plan standards, strategies, and guidelines.

This plan is divided into five major categories: Integrated Forest Management, Planning Activities, Information Systems, Public Information and Education, Administration and Appendixes.

The management activities planned for FY10 are based on the range of objectives established in the Implementation Plan (Table 1), as well as the assumption that the fiscal budget level will support these planned activities. The objectives and specific plans for timber harvesting and the associated project work provide an accurate picture of what will be designed and prepared for contract in FY10. Due to the time lag associated with contract duration, most of the actual on-the-ground logging and project operations will not occur for a period of one to three years beyond the end of the fiscal year.

In contrast to the timber harvest and project plans, young stand management, recreation management, planning and information activities detailed in this plan will actually occur within the FY10 time period.

The planned amount and location of all management activities are based on the latest site-specific assessments and estimates of operational, growth, and seasonal variables. Management activity levels may be adjusted and modified to account for any significant changes to these variables.

Detailed summary tables are contained in Appendix A, and individual "Pre-Operations Reports" for individual operations are contained in Appendix B. A vicinity map showing the general location of planned operations is contained in Appendix C. A public involvement summary is contained in Appendix D.

Harvest Levels: In accordance with the revised Astoria District Implementation Plan the District is planning to harvest 61.0 MMBF of timber from twelve primary operations in fiscal year 2010. See Table (A-1).

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

Note that the acres detailed throughout this report express net acres, unless otherwise stated.

Table 1. Annual Operations Plan objectives compared to annual objectives identified in the Astoria District Implementation Plan. All values are acres.

Silvicultural Activity	IP Annual Objective		2010 AOP Objective
	Low	High	
Partial Cut	600	3,250	605
Clearcut	350	1,400	1,226
Reforestation (Initial Planting)	600	2,100	2,000
Pre-commercial Thinning	0	1,300	0
Fertilization	0	300	0
Pruning	0	700	0

INTEGRATED FOREST MANAGEMENT OPERATIONS

Timber Harvest Operations

Overview of Timber Harvest Operations

The following planned commercial forest management activities are within the guidelines and objectives outlined in the current Astoria District Implementation Plan (IP). Tabular summaries (Appendix A) and detailed pre-operations reports for each planned operation (Appendix B) are attached. In this AOP, the Astoria District plans to conduct harvest operations on approximately 1.3% of the district's total acres. Of this 1.3%, 0.4% is a result of partial cut harvest and 0.9% is a result of modified clearcut harvest. Below are definitions of harvest types followed by more specific examples of the planned operations.

A more detailed explanation of harvest type definitions can be found on the ODF web site at http://egov.oregon.gov/ODF/STATE_FORESTS/planning.shtml

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 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 many times throughout its life. Partial cuts leave 80 or more square feet of basal area per acre on Site Class I, II, or III. The partial cuts in this plan will reduce stand density to a Stand Density Index range of 20 to 45 percent of maximum stand density. There are three types of partial cutting:

Heavy Partial Cut (PC-H): These partial cuts approach the harvest intensity of a Retention Cut, and the management focus may be on the existing cohort, new cohort, or both. A heavy partial cut results in the growth of individual trees, but reduces the total volume growth of the stand. Heavy partial cuts retain at least 80 square feet of basal area per acre and an SDI of less than or equal to 25 percent of maximum stand density.

Moderate Partial Cut (PC-M): These partial cuts provide for optimal stand growth and allow vigorous growth of the individual trees. Stand structure will continue to develop with a moderate partial cut, and depending on species composition and site index, a new cohort of trees may be initiated. Moderate partial cuts retain an SDI range of between 25-35 percent of maximum stand density.

Light Partial Cut (PC-L): These partial cuts focus on maintaining stand growth and health. However, in order to achieve these goals, it must occur more frequently than a Heavy or Moderate partial cut in the same stand. More complex stand structure will not be developed with a light partial cut, and a new cohort of trees will not be initiated. Light partial cuts retain an SDI range of between 35-45 percent of maximum stand density.

Stands designated for partial cut harvest in this operations plan fit into one or more of the following situations: stands that are currently Closed Single Canopy (CSC) or Understory (UDS) that are on a pathway to more complex structures; stands that need to be maintained as Layered (LYR); or to move stands on a pathway to Older Forest Structure (OFS); or to increase stands future volume/value while capturing mortality and promoting a second cohort of species. These operations thin conifers and hardwoods to maintain vigorous tree growth, retain deeper crowns and allow light onto the forest floor to initiate understory vegetation establishment and growth.

While partial cut prescriptions will increase tree growth, actual growth response in the understory will vary depending on several factors. Some of these factors include, but are not limited to: density of residual overstory trees, available seed source of shade tolerant tree species, existing ground cover, and site preparation. With the right combination of these factors, initiation of a shade tolerant conifer understory is very likely. In other cases, shade tolerant trees may have to be planted if a complex structure is desired. Yet in some partial cut stands, where there is no complex desired future condition (DFC) assigned, the following active management entry may be a clearcut harvest. In which case, establishment of an understory stand is not a priority.

The “non-thinnable” areas that often exist within partial cuts are made up of hardwoods, brushy areas, adequately stocked conifer, a mix of both adequately stocked conifer and hardwoods, or non-merchantable trees. These areas usually range in size from 1 acre to 20 acres. Leaving these areas unthinned contributes to biological diversity across the landscape.

Numerous green trees are retained on each acre of partial cut allowing for additional snag and down wood recruitment through natural processes over time.

Regeneration Harvest: The intent of a regeneration harvest is to develop a new stand. In general, residual trees left after a regeneration harvest are intended to remain on the site through the life of the new stand. There are two types of regeneration harvest- retention cut and modified clearcut:

Retention Cut (RT): These operations leave approximately 33 to 80 square feet of basal area on Site Class I, II, or III. The residual trees are well distributed across the harvest unit. These operations leave approximately 8 – 10 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): Generally, all regeneration harvest referenced in the Pre-Operations reports fall into this classification. These operations leave less than 33 square feet of basal area on Site Class I, II, or III. Harvest will leave an average of 8-10 trees and snags per acre. The leave trees may be scattered across the unit or clumped. Areas of green tree retention are included in harvest areas and are located along the riparian areas, on steep slopes above streams, inoperable areas, and/or in operationally strategic areas.

Stands designated for regeneration harvest in this operations plan fit into one or more of the following situations: over-stocked and dense stands, under-stocked stands, diseased stands, stands that are surplus to the complex structure targets in the desired future condition landscape design, highly marketable stands in areas where regeneration harvest would result in minimal resources impacts, and stands in areas that would provide an opening in the landscape to temporarily serve as big game foraging habitat and increase landscape diversity. During FY10, approximately 1,000 acres will grow out of the Regeneration (REG) stand type. The combination of new regeneration acres after harvest and outgrowth from REG to CSC will result in an increase of approximately 200 acres of the REG stand structure on the district.

Structural habitat components such as snags and down wood are considered for all harvest prescriptions. In the case of regeneration harvests, it is essential to incorporate structural habitat components into the management prescription to ensure they are retained.

In the Astoria District, laminated root rot disease is prevalent at endemic levels throughout much of the forest. Generally, stands infected with this disease retain the pathogen at moderate to low levels and cause tree mortality of individuals or in small groups. This endemic level of infection helps to create

snags, provides additional sources of downed wood and small openings within denser stands, and is generally not treated. If higher levels of laminated root rot exist, other prescriptions for treatment of the disease may be implemented in conjunction with the desired future condition and the landscape plan. Prescriptive treatments to heavily infected stands may include modified clearcuts or limited patch cuts, and then replanting these sites with disease resistant species, such as red alder or western red cedar. Tree protection measures are prescribed when planting western red cedar as this species is resistant to laminated root rot but susceptible to big game browse.

Structural components may be retained at higher levels in some units and at lower levels in other units, with the intent to achieve the targets outlined in the Forest Management Plan strategies in a given annual operations plan. The estimates used in the pre-operation reports for existing snags and down wood, and the estimates of post harvest expectations are based on ocular estimates, and past experience, which includes some survey work for both pre-harvest and post harvest conditions.

Stand Level Inventories (SLI) may be conducted on some FY10 timber sale areas prior to auctioning. Performing SLI on Partial Cut areas is no longer required prior to harvest. To determine whether a proposed regeneration harvest operation is in a complex structural stage, (LYR or OFS), a simplified version of SLI will be conducted to collect enough data to determine stand condition. Where we have current SLI information, it is used in the pre-operation reports. SLI provides us with better data of snag and down wood amounts that presently exist in each stand.

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).

The FY10 operations are estimated to generate gross revenues of approximately \$10,309,167 and net revenues of \$8,988,283 (see Appendix A). It is estimated that active management will result in producing approximately 56.9 million board feet of conifer volume, 4.1 million board feet of hardwood volume, for a total of 61.0 million board feet of volume. Refer to the attached Financial Summary table and/or pre-operation reports for more detail.

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 & reflect Primary Operations only.

Stand Structure	REG	CSC	UDS	LYR	OFS	GEN¹
Current	N/A	410	1,017	404	N/A	
Post Harvest ²	1,226	N/A	361	244	N/A	
Desired Future				136	254	1,441

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 is an estimate of how the stands will develop in five to ten years after the operations is completed.

Summary of Planned Timber Harvest Operations by Basin

In the following section, the commercial forest management operations planned for FY10 will be summarized in the context of the 17 management basins on the Astoria District. ODF and ODFW resource specialists reviewed the FY10 operations plan and provided input. Individual pre-operation reports include information regarding riparian protection and structural components such as snags, down woody debris, and green tree retention. Since the Forest Management Plan strategies provide standards for these components, they are not directly addressed in this AOP. Road concerns and standards are discussed in the Transportation Planning and Harvesting section.

Table 3. Summary of Timber Harvest Operations in each basin. All values are in acres & reflect Primary Operations only.

Basin	2010 AOP		Cumulative Operations ¹ ('02 through '10)	
	Partial Cut	Clearcut	Partial Cut	Clearcut
Astoria	0	0	1,279	175
Beneke	0	0	1,213	706
Buster	80	232	3,170	1,072
Crawford	0	0	177	0
Davis	250	84	389	399
Fishhawk	20	134	1,832	178
Gnat	0	0	1,755	997
Hamilton	90	91	328	609
Klaskanine	30	282	584	538
Lousignot	0	0	675	369
N. Fork Nehalem	0	0	991	569
Northrup	90	272	1,723	726
Plympton	0	0	2,042	256
Quartz	0	55	1,964	646
Sager	0	0	1,667	167
Scattered	45	76	371	344
Sweethome	0	0	471	642

¹ The Cumulative Operations include all Timber Harvest Operations, prepared and proposed, under the Forest Management Plan beginning July 1, 2001 through June 30, 2010. Operations or units that were proposed, but have been subsequently dropped, are not included in the total.

ASTORIA BASIN

There is no harvest planned in this basin for FY10.

BENEKE BASIN

The only operation planned for this basin is an alternate.

Lion's Lair: This operation is comprised of three modified clearcuts totaling 126 acres. The three areas combined are currently a mixture of UDS and LYR. Swordfern is the primary understory species within the sale areas. All the areas are designated as General.

BUSTER BASIN

Operations will reduce UDS stands by 1.6%, increase LYR by 0.4%, and increase REG by 1.2% within this basin.

Buck Ranch: This operation is comprised of one 75 acre modified clearcut and one 80 acre partial cut. Areas 1 & 2 have a DFC of General and consist primarily of Douglas-fir, red alder and western hemlock. Area 1 will be harvested and replanted with a mixture of species. Area 2 will be thinned to promote some layering and to leave the stand with the option to either be a complex stand or a clearcut in the future.

Winslow: This operation is comprised of three modified clearcut units totaling 157 acres. All stands are composed of Douglas-fir with scattered alder and mixed conifer species. Areas 1, 2, & 3 are currently in UDS structure. All areas are designated General.

Alderberry (alternate operation): This operation is comprised of two modified clearcut units, totaling 62 acres. All stands are composed mostly of red alder with small patches of Douglas-fir, hemlock, cedar, spruce and big leaf maple. Areas 1 and 2 are currently in UDS stage and designated General.

Green Giant (alternate operation): This operation is comprised of two modified clearcuts, Areas 1 & 3, and two partial cuts, Areas 2 & 4. Areas 1 & 3 are designated General and are composed of moderately sized Douglas-fir with a secondary mix of western hemlock and some cedar. Areas 2 & 4 are also designated General, and Douglas-fir as the primary species, however, these stands will be thinned leaving the minor species to grow.

Moore Mullenbach (alternate operation): This operation consists of one modified clearcut 39 acres in size. Red alder is the primary species with some western hemlock and Douglas-fir. The stand is designated General and will be replanted with a mixture of conifer species.

Rapid Rewards (alternate operation): This operation is comprised of four partial cut units totaling 139 acres. All the sale areas are categorized as UDS, consisting primarily of Douglas-fir of varying size. Secondary species is western hemlock with some red alder within the riparian areas. The understory for all areas is composed of salal, Oregon grape, swordfern and huckleberry. The DFC is LYR for all Areas.

CRAWFORD BASIN

There is no harvest planned in this basin for FY10.

DAVIS BASIN

Operations will reduce CSC by 3.4% and increase UDS by 2.0%; LYR by 0.2% and REG will increase by 1.2%.

Wallhanger: This operation is comprised of one partial cut unit totaling 250 acres and two modified clearcuts totaling 84 acres. Area 1 is currently a CSC stand that will be thinned to a SDI of 30-35%. Hemlock is the primary species with some other conifers and red alder occurring in small clumps. This thinning will begin moving the stand to its DFC of OFS. Areas 2 and 3 are currently UDS stands with hemlock and alder as the primary species with some western red cedar. After harvest the stand will be replanted with a mixture of species. Both Areas are designated General, however, after planting could be a candidate for a complex stand in the future.

FISHHAWK BASIN

Operations will reduce UDS by 1.5% and LYR by 1.1%. REG will increase by 2.6%.

Mombo Combo: This operation is comprised of three modified clearcut units (Areas 1 - 3), totaling 134 acres and one partial cut unit (Area 4), totaling 20 acres. Areas 1-3 consist of Douglas-fir with some scattered hemlock and cedar. There are some hardwoods within Areas 1-3, although they are mostly located within riparian areas. The current condition of Areas 1-2 is UDS and they are designated General. Area 3 has a current condition of LYR and is designated General. Area 4 has the same species composition as Areas 1-3, however, the DFC is LYR and the stand will be thinned to an SDI of 35-40.

GNAT BASIN

The only operations planned for this basin are alternates.

Ice Box Thinning (alternate operation): This operation is comprised of five partial cut units totaling 483 acres and one modified clearcut of 62 acres. The partial cut harvest will be a first entry thinning for all five areas, allowing for increased structural growth within the stands. Areas 1-4 are currently in the UDS condition and all have a DFC of General with the exception being Area 1 which has a DFC of OFS. Species composition is mixed conifer, including hemlock, Douglas-fir, true fir and spruce. The thinning will be done to promote achieving the complex structure in the OFS and LYR stands, while increasing diversity in the General stands. Area 5 is currently a CSC stand consisting mainly of spruce. The objective is to thin the stand stimulating tree and understory growth. Area 5 is designated LYR. Area 6 is the modified clearcut area consisting of mostly Sitka spruce and western hemlock. Area 6 is designated General and will be replanted with Douglas-fir to accompany the remnant hemlock that is anticipated to naturally seed after harvest.

White Noise (alternate operation): This operation is comprised of three partial cut units, totaling 304 acres and one modified clearcut unit, totaling 29 acres. Areas 1 & 3 are 34-36 year old plantations that have been pre-commercially thinned once. The stands are currently in a UDS stage and need thinning in order to promote additional understory growth and allow the tree crowns more growing space. The DFC for Areas 1 and 3 is General. Area 2 consists of a 78 year old conifer stand that was commercially thinned once; this second thinning will reopen the canopy to allow more layering of understory vegetation to occur. The DFC of Area 2 is a mix of OFS and General. Area 4 is the modified clearcut within this sale. The stand consists of 83 year old mixed conifer. Area 4 is designated General.

HAMILTON BASIN

Operations within this basin will reduce UDS by 1.8%, and reduce CSC 0.8%; REG will increase by 1.3% and LYR will increase by 1.3%.

Happy Gilmore: This operation is comprised of two partial cut units consisting of Douglas-fir and western hemlock as primary species. The stands are approximately 40 years old and are currently in the UDS phase of development. The DFC for both stands is LYR with 4 acres in Area 1 having the DFC of OFS. It is anticipated that the stands will quickly promote to LYR after harvest.

Summit Combo: This operation is comprised of three modified clearcut units totaling 91 acres. The modified clearcuts are composed primarily of western hemlock and Douglas-fir with some scattered red alder. Area 1 and 2 are dense, overstocked stands, and are categorized as CSC, while Area 3 is categorized as UDS. These are all designated General.

KLASKANINE BASIN

Operations will reduce UDS by 0.7%; LYR by 3.7%; and CSC by 0.1%. REG will increase by 4.5%.

California Elk: This operation is comprised of two modified clearcut units (Areas 2 & 3) totaling 103 acres and one partial cut unit totaling 30 acres. The modified clearcuts are classified as LYR and are comprised of mostly western hemlock with scattered Douglas-fir, Sitka spruce, western red cedar. The DFC for these stands is General. Area 1 is classified as UDS and consists mostly of western hemlock with Douglas-fir, spruce and red alder scattered throughout. The partial cut prescription will promote the stand towards LYR, which is the desired future condition for that stand.

Leonard Elk: This operation is comprised of three modified clearcut units totaling 179 acres. Species composition consists of western hemlock, red alder, Sitka spruce, Douglas-fir, and western red cedar. The stands are currently in a LYR condition. All stands within this sale have a DFC of General. They will be replanted with a mixture of conifer species.

LOUSIGNOT BASIN

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

NORTH FORK NEHALEM BASIN

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

NORTHRUP BASIN

Operations will reduce UDS by 3.8% and increase REG by 3.8%.

Greasy Alder: This operation is comprised of two retention cut units, totaling 64 acres. Both areas consist primarily of red alder with scattered bigleaf maple, Douglas-fir, western hemlock and western redcedar. The stands are currently in a condition of UDS and have a desired future condition of General. The retention cut will focus on leaving a new cohort of young trees in the stand and eliminating the bigger, dominate hardwoods. A mixture of conifer species will be planted after harvest.

Sprague's Stump: This operation is comprised of three modified clearcuts, totaling 208 acres and one partial cut, totaling 90 acres. The modified clearcut units are currently in a UDS condition and are designated General. They are composed of mostly 46-70 year old Douglas-fir with mixed conifer and hardwood interspersed. The partial cut unit is approximately 60 years old and is also composed of Douglas-fir with scattered mixed conifer and hardwoods. The stand is currently in a UDS condition and has a DFC of General. Thinning will be done from below, retaining minor species in order to provide the future management option of providing a complex stand or a clearcut stand in the future.

Fosters 40 (alternate operation): This operation is comprised of two modified clearcuts, totaling 130 acres and two partial cuts, totaling 189 acres. The modified clearcut units consist of 60 year old Douglas-fir with some hardwoods interspersed. The stands currently are in a condition of UDS/CSC and are designated General. Areas 2 and 4 are also a 60 year old mixed conifer stand that have a DFC of General. The stand will be thinned from below to an SDI of 25-30 and minor species will be reserved. It is anticipated that the thinning will open the stand to provide more development of tree crowns and understory.

Mulak Thin (alternate operation): This operation is comprised of two partial cuts, totaling 51 acres and one group selection cut, totaling 3.5 acres. Areas 1 and 2 have a DFC of LYR and will be thinned to create more stand structure components needed to achieve the complex DFC. Snag and down wood creation will be done in areas that are lacking these components as noted during sale layout. Area 1A is a 3.5 acre patch where stagnant trees will be removed to create a dynamic gap within the LYR landscape.

PLYMPTON BASIN

The only operation planned for this basin is an alternate.

Haggis Hunt (alternate operation): This operation consists of two modified clearcuts totaling 53 acres. The two areas are composed of Douglas-fir and western hemlock with some smaller cedar. The stands have gaps throughout due to previous windfall and salvage. The stands are categorized as UDS and LYR and are designated General.

QUARTZ BASIN

Operations will reduce LYR by 0.6% and increase REG by 0.6%.

Courtside: This operation is comprised of two modified clearcuts totaling 55 acres. Both areas consist of Douglas-fir, western hemlock, scattered noble fir and some red alder. Currently the stands are classified as LYR and are not planned to have a complex desired future condition. They will be replanted with a mixture of conifer species.

Hubbub (alternate operation): This operation is comprised of three modified clearcut units totaling 125 acres. The stands range from 45-60 years old and have a large red alder component mixed in with the conifer. All areas are designated General. A mixture of conifer species will be replanted after harvest.

SAGER BASIN

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

SCATTERED BASIN

Operations will reduce CSC by 3.0% and increase REG by 2.0% and increase UDS by 1%.

Modified Green: This operation is comprised of three modified clearcuts totaling 76 acres and one partial cut unit totaling 45 acres. The modified clearcut units are approximately 54 to 72 years old, and are primarily western hemlock stands with very minor components of Sitka spruce, true fir, Douglas-fir, and alder. The current condition of these stands is CSC and they are designated General. The Partial cut is a first entry partial cut, with the objective of increasing tree growth by increasing growing space for the residual trees and capturing anticipated tree mortality from high stand densities. This stand is currently in a CSC/LYR condition and is designated General.

SWEETHOME BASIN

The only operation planned for this basin is an alternate.

Puma Punch (alternate operation): The operation is comprised of one modified clearcut (Area 1) totaling 67 acres, and one partial cut (Area 2) totaling 43 acres. The modified clearcut is composed of 70 year old mixed conifer. The DFC of this stand is General, although, an effort will be made to leave trees that will promote layering in the future stand. Area 2 is currently in a CSC condition and has a DFC of General. This Area will be thinned lightly to increase tree growth within the stand and promote structural diversity.

Forest Roads Management

Overview

A variety of forest road and transportation system management and Land surveying activities are planned for this AOP. Primary objectives include providing forest access and meeting the goals, objectives and standards contained in the *Forest Roads Manual*. As site specific information is gained during the preparation of planned management activities, emphasis will be given to refinement of Level III Transportation Plans in conformance with:

- The 12 Guiding Principles for Road Management
- Oregon Department of Forestry Road Standards

The District will be beginning to focus some time and effort on the removal of invasive species from roadside areas. This program entails cooperation from several of the management units on the District. See the Young Stand Management section of this report for more details on the Invasive Weed program.

A summary of estimated values for planned timber operation road and project work activities is shown in the Forest Roads Summary Table, in Appendix A. Estimated project values for alternate timber sales have not yet been fully determined.

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

	Mainline	Collector	Spur	IP Period (FY10-FY19)	IP Annual Range
	AOP	AOP	AOP	IP	IP ¹
Road Construction	0	1	13.1	150-200	15-20
Road Improvement	1.5	13.1	17.1	250-300	25-30
Road Closure/Vacation	0	0	5.65	40-60	4-6

¹ These are estimates derived from page 25 of the 2009 District Implementation Plan. The values here were derived by dividing the values in the Roads narrative by 10. The miles may be high one year and low another but are expected to be within the total IP ranges at the end of the IP period, in 2019.

Road Construction

1.0 miles of Collector and 13.1 miles of Spur roads will be constructed with planned timber sale projects or other projects during the 2010 AOP. Collector type roads will be surfaced with hard rock to facilitate all weather hauling. Of the 13.1 miles of Spur roads identified in this plan, approximately 28% or 3.65 miles are planned to be native earth (dirt) roads. All of the dirt spurs will be closed or vacated upon completion of road use. In addition to the dirt spurs that will be vacated, there will be 2 miles of rocked spurs vacated.

Therefore, this Operations Plan will increase the amount of active roads by an estimated 8.45 net miles.

Road Improvement

Road improvement projects will use ODF road inventory protocols to assess existing road drainage, stability, surfacing and vegetation conditions and to aid in the development of transportation system improvement plans.

- With this plan, approximately 1.5 miles of Mainline, 13.1 miles of Collector, and 17.1 miles of Spur roads are identified for improvement with planned operations.

Road Access Management

With this plan, approximately 5.65 miles of roads are identified for closure and/or permanent vacating with these operations, as follows:

- Modified Green: Planned road closures include approximately 0.25 miles of dirt road constructed for timber sale access.

- California Elk: Planned road closures include approximately 0.5 miles of dirt road constructed for timber sale access.
- Mombo Combo: Planned road closures include approximately 0.5 miles of dirt road constructed for timber sale access.
- Happy Gilmore: Planned road closures include approximately 0.4 miles of dirt road constructed for timber sale access.
- Sprague's Stump: Planned road closures include approximately 1.3 miles of dirt road constructed for timber sale access.
- Wallhanger: Planned road closures include approximately 2.0 miles of rock spur road.
- Winslow: Planned road closures include approximately 0.5 miles of dirt road constructed for timber sale access.
- Greasy Alder: Planned road closures include approximately 0.2 miles of dirt road constructed for timber sale access.

Other old abandoned or legacy type roads that are found during sale layout will be evaluated for vacating.

Other Road Management Activities

Rock quarry development and/or rock crushing is necessary to provide sufficient quantities of road rock for planned road construction, road improvement and road maintenance activities. Quarry developments are planned for the following operations:

- Leonard Elk
- Modified Green
- Sprague's Stump

Road Maintenance

Planned road maintenance activities will be accomplished by timber sale contracts and by the district road crew. A breakdown of planned road maintenance activities follows:

- Timber Sale Contracts: Approximately 83.2 miles of active road maintenance (associated with hauling operations and road use) is planned for under timber sale contracts.
- California Elk: Mechanical road brushing is planned for the haul route and sale access roads.

District Road Crew: The district road crew will perform routine road maintenance activities on approximately 50 miles of inactive and active forest roads located throughout the district.

Land Surveying

All necessary property line and corner maintenance has been completed for the FY2010 primary operations. Items that remain to do are listed below and are for alternate operations only. Work on alternate operations will be prioritized by need and budget considerations. At this time no survey work is planned for FY2010.

- Validate, rewitnes, or restore 29 corners.
- Traverse, blaze and post approximately 1.25 miles of property line.

Young Stand Management

The young stand management program involves the application of various silvicultural treatments intended to create diverse management options for future stand and forest development under the objectives of the Northwest Forest Management Plan. These applications include site preparation, fertilization, planting, interplanting, underplanting, rehabilitation, vegetation management, invasive species control, tree protection, precommercial thinning, and pruning. To meet the objectives of the Northwest Oregon Forest Management Plan, specific prescriptions of the above applications must be developed for each set of forest and environmental conditions.

Forest health strategies within this program focus on a diverse composition of tree species to provide stability and resiliency to the forest, especially with regard to pests. Implementation of a diversity of tree species at the time of reforestation can minimize the levels and severity of pest outbreaks while diversifying the forest both structurally and compositionally. Enhancing the diversity of native species contributes to habitats and conditions suitable for the many natural dynamics that keep pest populations and damage within acceptable levels. The program incorporates improved and locally collected seed with a greater resistance to native and non-native pests. This integration process reduces the susceptibility to forest health issues of Northwest Oregon such as Swiss Needle Cast.

See the Young Stand Management Table in the Appendix A for a more detailed description for what is planned in FY 2010.

The following specific activities will be conducted throughout the fiscal year:

Rehabilitation

There are currently no areas scheduled for rehabilitation in FY 2010.

Site Preparation

These activities prepare the planting sites to enable new conifer stands to meet stocking guidelines and become free to grow. The site preparation activities consist of primarily two site specific prescriptions:

(1) Herbicides applied by helicopter or by ground methods target site specific vegetation species that will aggressively compete with the newly planted trees. In FY 2010, there are 245 acres proposed for aerial site preparation and 483 acres allocated for ground based site preparation.

(2) Dense slash concentrations created during timber harvest will be mechanically piled and burned during the fall season to improve and open up planting areas. Approximately 280 acres are proposed for mechanical site preparation and pile burning.

Planting

Planting is comprised of matching the appropriate species and stock type to the planting site. Forest health strategies are addressed on a site-specific basis when the planting plan is developed. Site specific prescriptions consider target species, Swiss Needle Cast risk, *Phellinus weirii* (laminated root rot) presence, protection of water quality, required stocking guidelines, natural advanced regeneration, and the desired future condition of the stand. To accomplish this, a mixture of species is planted to provide for a healthy, productive, and sustainable forest ecosystem over time. This strategy provides for diverse habitats for wildlife and biodiversity while offering a full range of social, economic, and environmental benefits for future generations.

The planting plan anticipates 2,000 acres of initial planting in regeneration harvest units. This number is higher than most years, due to the replanting of some of the stands that were salvaged after the windstorms of December 2006 and 2007. Seedling availability and the ordering of the seedling stock is

a factor that weighs heavily on the ability to quickly react to a large blow-down event that requires replanting areas of the forest. A mixture of the following species will be planted based upon the site characteristics: western hemlock, Douglas-fir, and sitka spruce. Stocking densities are site specific and natural regeneration is considered when establishing a new stand.

Vegetation Management

Vegetation management activities focus on releasing existing conifer or hardwood stands which have been overtopped by competing vegetation, or controlling roadside brush encroachment. Various prescriptions focus on ensuring that newly established stands are kept in a healthy condition so the forest stand will continue to grow to its biological and economical potential. In young stand management, the plan includes 943 acres of manual release in FY2010.

Tree Protection

This activity is designed to protect young stands from being foraged by big game species or Mountain Beaver. Site specific prescriptions are utilized to protect trees from damage so the forest stands can develop into their desired future condition. The district plans to trap mountain beavers on 900 acres.

Precommercial Thinning (density management)

Due to budget reductions, no precommercial thinning is planned for FY2010.

Invasive Weed Management

Due to budget reductions, no invasive weed management is planned for FY2010.

Pruning

There are currently no areas planned or identified for pruning for FY 2010.

Recreation Management

Overview of Recreation Management

Recreation is diverse on the Clatsop State Forest, with dispersed use throughout the forest. Activities include horseback riding, hiking, mountain biking, all terrain vehicle (ATV) riding, family camping, group camping, hunting, target shooting, fishing, nature study, and sight seeing. Due to agency budget constraints, the primary focus of the District Recreation Program will be directed at base level maintenance of existing infrastructure and trails.

The Astoria District recreation program is composed of a Support Unit Forester, a Recreation Forest Management Technician, a Off Highway Vehicle Management Technician, a seasonal laborer and a County Deputy Sheriff. The District Administration Unit and Office Manager also provide administrative support and services to the recreation program. Other District units such as the Forest Management, Engineering and Reforestation integrate with the recreation program combining planned management activities with the recreation program plans and goals.

Utilizing the South Fork Inmate Camp for maintenance and repairs of recreation facilities is a critical component of the recreation program. Completion of maintenance projects for FY 2010 will require the continued efforts of South Fork.

Planning

An action plan has been developed to address findings in the recently completed independent Second Party Recreation Assessment. A Leadership Team comprised of NW Oregon recreation unit foresters and selected program staff is engaged in implementing this action plan and will continue the implementation process through this AOP.

Construction drawings for improvements to the Lost Lake Day Use Area have been obtained through contract services with Walker Macy. Funding for implementation of these improvements is not available in this AOP. The District is currently exploring opportunities with the Oregon National Guard through its Innovative Readiness Training Program to implement the parking lot improvement portion of the construction drawings in FY 2011.

Facilities (Campgrounds, View Points, Trail Heads, etc)

New Facilities Development

Development of an OHV Program for the Astoria District.

Over the past three years the Astoria District has been working collaboratively with the District Recreation Advisory Committee and local Off Highway Vehicle (OHV) Club, Pacific Trail Riders, to explore potential development of the Nicolai Mountain Area for an OHV riding area as identified in the current District Recreation Management Plan. Decisions related to development of this opportunity have been contingent upon available staffing resources and findings from the Recreation Second Party Assessment which was completed in 2007.

With the Recreation Program decision to implement development of an OHV opportunity on the Astoria District, the District submitted a grant proposal to the Oregon Parks and Recreation Department (OPRD) All Terrain Vehicle (ATV) Grant Allocation Committee for funding of a Forest Management Technician to begin development of this opportunity.

The district has received approval for funds from the Oregon Parks and Recreation ATV grant and beginning in July of 2009, the grant will be used for employee wages, planning and on the ground development of the District's ATV program.

Continued development of this ATV opportunity will be dependent upon available of funding through program budgets, ATV grant opportunities, and other funding sources as available.

Through the ATV grant, Astoria District will complete the following OHV accomplishments in this AOP:

- Construct two miles of ATV trail to access the Nicolai area from the proposed staging area off Highway 30.
- Inventory and GPS mapping of existing and planned dispersed ATV trails.
- Development of a basic Memorandum of Understanding with Pacific Trail Riders to assist in development of the Nicolai Mountain ATV area.

Facilities Operations/Maintenance (campgrounds, view points, trail heads, etc.)

Facilities

The Astoria District is responsible for operation and maintenance of three fee campgrounds, one dispersed recreation area, seven dispersed sites, two interpretive sites, and six designated trailheads.

- Gnat Creek Campground
- Henry Rierson Spruce Run Campground
- Northrup Creek Horse Camp
- Lost Lake dispersed recreation area (proposed day use area)
- Lower Nehalem dispersed sites (four)

- North Fork Nehalem dispersed sites (three)
- Astoria District Demonstration Forest
- Chet Reed Arboretum
- Gnat Creek Trailhead
- Bloom Lake Trailhead
- Soapstone Lake Trailhead
- Northrup Creek Equestrian Trailhead
- Spruce Run Creek Trailhead
- Demonstration Forest Trailhead

Activities associated with facility operation and maintenance includes:

- Campground host recruitment and supervision
- Coordination of daily maintenance activity by South Fork Inmate Camp
- Scheduling of garbage and recycling services, vault toilet pumping, well maintenance
- Well water testing
- Sign and information board management
- Fee collection
- Public contacts/use management
- Public Use monitoring
- Assessment and coordination of facility repairs
- Firewood sales
- Lost and Found program

Trails

Trail construction and associated maintenance has been steadily increasing on the District. Currently there are approximately 19 miles of designated non-motorized trails on the District.

Trail maintenance (non-motorized)

- Gnat Creek Trail – Four miles
- Bloom Lake Trail – Two miles
- Soapstone Lake Trail – Two miles
- Demonstration Forest Trail – One mile
- Northrup Equestrian Trails – Eight miles
- Spruce Run Creek – Two miles

Resource Specialists or Contract Service Providers:

The following resource specialists, providers of contract services, and public user group clubs and organizations are an essential part of the Astoria District recreation program.

- Public/user group clubs and organizations.
- South Fork Inmate Camp provides grounds/facilities construction and maintenance support.
- ODF&W: Consulted on wildlife and fisheries issues.
- Forest Management, Engineering, Reforestation and Administration Staff for integration with other planned management activities and staff support.

Other Recreation Management Activities

General Projects

As time and resources permit, recreation staff will continue to update and refine existing technical tools used to manage the recreation program. These efforts will include: updating the GIS trails layer for the District, finalizing a trails and bridge inventory process and protocols for bridge inspections, identifying and GPS locating dispersed recreation sites across the forest, and refining the conceptual “district vision” for recreation on the Clatsop State Forest.

Volunteer Efforts

In FY 2009, the Clatsop State Forest had 2,479 hours of volunteer work consisting of trail volunteers (Equestrian Trails & Pacific Trail Riders), camp-host programs, and various recreational committee member participants. The District Recreation Staff will continue to develop a working relationship with local clubs and organizations, and promote volunteerism on the forest.

Law Enforcement

Law enforcement for the district, particularly for the recreation program, is handled through a contract with the Clatsop County Sheriff’s Office (CCSO). Funding for the contract for law enforcement with the CCSO has been requested and is planned for FY 2010.

Land Exchange

In January 2009, the Land Exchange and Acquisition Plan for the Astoria District was approved by the Board of Forestry. Currently negotiations are ongoing with the City of Cannon Beach with the intent to exchange 805 acres of Board of Forestry lands for parcels that are identified in the Land Exchange and Acquisition Plan.

Other Integrated Forest Management Operations

Public Woodcutting

The woodcutting program provides opportunities for the public to cut firewood in the Clatsop State Forest. This operation is under the direction of the Management Unit Foresters. Wood cutting permits are issued once the commercial harvesting operations have been completed. Each permit costs ten dollars and is issued for two cords of wood. During the FY 2010, it is estimated that the Astoria District will issue approximately 500 woodcutting permits.

Special Forest Products

The Astoria District currently administers a Special Forest Products program which consists of issuing Commercial Use Permits to individuals who wish to collect larger quantities of various forest products with the intent to be re-sold. There is a fee charged to persons getting a Commercial Use Permit which depends on the product type and amount desired by the permittee. Special Forest Products include mushrooms, seedlings, boughs, salal, and moss. Additionally, the public has the ability to gather smaller quantities of these forest products, free of charge, for personal use.

Planning (and Information Systems)

The following on-going planning, monitoring, and information gathering activities will be conducted throughout the next fiscal year:

Stand Level Inventory and Other Vegetation Inventories

Since 2001, the Astoria District has conducted a rigorous Stand Level Inventory (SLI) regime yielding 56% of the District's stands and 74% of the district acres inventoried to date. It is anticipated that during FY10 the District will conduct some SLI, utilizing current staff to continue the inventory process throughout the year.

Stocking surveys will be conducted on young conifer stands to determine stocking levels in the one-year-old and three-year-old stands. Approximately 900 acres of stocking surveys will be conducted on these types of stands in FY 2010.

Fish and Wildlife Surveys

All of the proposed sales in this AOP have been reviewed by ODF and ODFW biologists. Survey requirements are based on current policy, protocol and biologist recommendations.

An Oregon Department of Fish and Wildlife (ODFW) contract crew and/or private contractor will complete stream surveys to determine fish presence in streams currently unknown.

The Astoria District will continue its northern spotted owl survey program, in order to effectively comply with federal and state Endangered Species Acts and to contribute to the Forest Management Plan (FMP) goals. Survey requirements for each sale are determined in accordance with November, 2002 ODF Policy Guidance: *Northern Spotted Owl Surveying on State Forest Lands*. The survey methodology utilized by ODF is the *Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls*. This protocol, originally dated March 1991 and revised March 1992, is endorsed by the USFWS.

A private contractor will continue the annual surveying for northern spotted owls near planned operations and to monitor the status of occupied sites. It is estimated that this will entail approximately 360 survey stations, 1,080 individual nighttime surveys conducted, and 15 daytime follow-up surveys.

This district will also continue its marbled murrelet survey program, in order to comply with federal and state Endangered Species Acts and to contribute to the Forest Management Plan (FMP) goals. Survey requirements for each sale are determined in accordance with January, 2005 ODF Policy Guidance: *Marbled Murrelet Operational Policy, 2004 Revision*. The survey methodology and standards utilized by ODF are based on the protocol developed by the Pacific Seabird Group (2003 revision).

A private contractor will continue the annual surveying for marbled murrelets near planned operations and to monitor the status of occupied sites. It is estimated that this will entail approximately 35 sites, 174 stations, and 299 surveys.

Table 5. Summary of status of T&E surveys.

Operation	Species (NSO/MM)	Status
California Elk	NSO	Surveyed in 2004, 2005, 2006, 2007, 2008 & 2009 with no detections.
California Elk	MM	Surveyed in 2004, 2005, 2006, 2007, & 2008.
Courtside	NSO	Surveyed in 2006, 2007, & 2008 with no detections.
Courtside	MM	Non-Suitable Habitat; No surveys required.
Fosters 40	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
Fosters 40	MM	Non-Suitable Habitat; No surveys required.
Greasy Alder	NSO	Surveyed in 2007 & 2008 with no detections.
Greasy Alder	MM	Surveyed in 2007 & 2008 with no detections.
Haggis Hunt	NSO	Surveyed in 2006, 2007, & 2008 with no detections. Will survey in 2009.
Haggis Hunt	MM	Non-Suitable Habitat; No surveys required.
Lion's Liar	NSO	Surveyed in 2006, 2007, & 2008 with one detection attributed to the Deliverance owl site. Will survey in 2009.
Lion's Lair	MM	Non-Suitable Habitat; No surveys required.
Modified Green	NSO	Surveyed in 2007 & 2008 with no detections.
Modified Green	MM	Surveyed in 2007 & 2008 with presence detections in 2008.
Mombo Combo	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
Mombo Combo	MM	Non-Suitable Habitat; No surveys required.
Rapid Rewards	NSO	Surveyed in 2008 with no detections. Will survey in 2009.
Rapid Rewards	MM	Surveyed in 2008 with no detections. Will survey in 2009.
Sprague's Stump	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
Sprague's Stump	MM	Non-Suitable Habitat; No surveys required.
Summit Combo	NSO	Surveyed in 2004, 2005, 2006, 2007, & 2008 with no detections. Will survey in 2009.
Summit Combo	MM	Surveyed in 2004, 2005, 2006, 2007 & 2008 with no detections.
Wallhanger	NSO	Surveyed in 2006, 2007, & 2008 with no detections. Will survey in 2009.
Wallhanger	MM	Surveyed in 2006 & 2007 with no detections.
White Noise	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
White Noise	MM	Surveyed in 2007 & 2008 with no detections.
Alderberry	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
Alderberry	MM	Surveyed in 2007 & 2008 with no detections.
Buck Ranch	NSO	Surveyed in 2008 with no detections. Will survey in 2009.
Buck Ranch	MM	Non-Suitable Habitat; No surveys required.
Green Giant	NSO	Surveyed in 2008 with no detections. Will survey in 2009.
Green Giant	MM	Non-Suitable Habitat; No surveys required.
Happy Gilmore	NSO	Non-Suitable Habitat; No surveys required.
Happy Gilmore	MM	Surveyed in 2008 with no detections. Will survey in 2009.
Hubbub	NSO	Surveyed in 2008 with no detections. Will survey in 2009.
Hubbub	MM	Surveyed in 2008 with no detections. Will survey in 2009.
Ice Box Thinning	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
Ice Box Thinning	MM	Non-Suitable Habitat; No surveys required.
Moore Mullenbach	NSO	Surveyed 2004 - 2008 with detections in '04-'06. Will survey in 2009.
Moore Mullenbach	MM	Non-Suitable Habitat; No surveys required.
Leonard Elk	NSO	Surveyed in 2004, 2005, 2006, 2007, 2008 & 2009 with no detections.
Leonard Elk	MM	Surveyed in 2004, 2005, 2006, 2007, & 2008 with detections in 2008. MMMA was established in 2008.
Mulak Thin	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
Mulak Thin	MM	Surveyed in 2007 & 2008 with no detections.
Puma Punch	NSO	Surveyed in 2007 & 2008 with no detections. Will survey in 2009.
Puma Punch	MM	Surveyed in 2007 & 2008 with detections. MMMA established in '08.

Operation	Species (NSO/MM)	Status
Winslow	NSO	Surveyed in 2006, 2007, & 2008 with no detections. Will survey in 2009.
Winslow	MM	Non-Suitable Habitat; No surveys required.

Watershed Assessments

In 2005 the State Forest Watershed Analysis Program initiated a watershed analysis that was done on the Upper Nehalem Watershed on the Clatsop State Forest. The analysis was completed in the spring of 2006. The Department put together a Watershed Implementation Team (WIT) to come up with an action plan that would address the concerns of the analysis. The action plan clearly lists an ODF response (management activity) to the issues of concern that were documented in the Watershed Analysis.

During the FY10 AOP, the District will continue to address areas of concern listed in the WIT Action Plan. The list of management activities to be completed by the Department can be found in Table 1 of the Upper Nehalem Watershed WIT Action Plan. Stream enhancement projects are anticipated to be done during several of the FY10 sales. ODFW provides consultation and oversight to the planning and carry out phases of these projects.

A Lower Nehalem Watershed Analysis is planned; however, it is not anticipated to be done during the FY10 AOP.

Research and Monitoring

The Riparian Stream Temperature (“RipStream”) monitoring Project has been active on the District since 2003, and at this time has been suspended until other funding sources are secured. The project consists of five sites on State Forest land and 4 sites on Private Ownership where pre and post harvest data was collected. The objective of this study is to provide a coordinated monitoring effort with which to evaluate effectiveness of Forest Management Plan riparian strategies in protecting stream temperature, and promoting riparian structure that provides necessary functions for the protection of fish and wildlife habitat.

Public Information and Education

A number of district employees annually participate in the local school Career Day, Sixth Grade Forestry Tour and Field Day, demonstration forest tours, Clatsop County Fair booth, State Fair booth, and many public school presentations. The district also has representatives who attend local watershed council meetings, including the Upper Nehalem Watershed, and the Nicolai-Wickiup Watershed. Additionally, the Assistant District Forester is on the Board of Directors of the North Coast Watershed Association and the District Forester participates on the Clatsop Forest Economic Development Committee (CFEDC).

Administration

The State Forest Program in the Astoria District is organized into five separate functional work units. They are headed by a Unit Forester or Unit Supervisor/Manager, and directly supervised by the Assistant District Forester (Operations Manager). The five work units include:

Administration includes the District Forester, Assistant District Forester, Office Manager and clerical staff. The administrative function provides policy and planning direction, budgeting, coordination between units and programs, oversight to the field units, public contact and clerical support. The office manager and clerical staff are split funded with funds from all of the programs they are involved in.

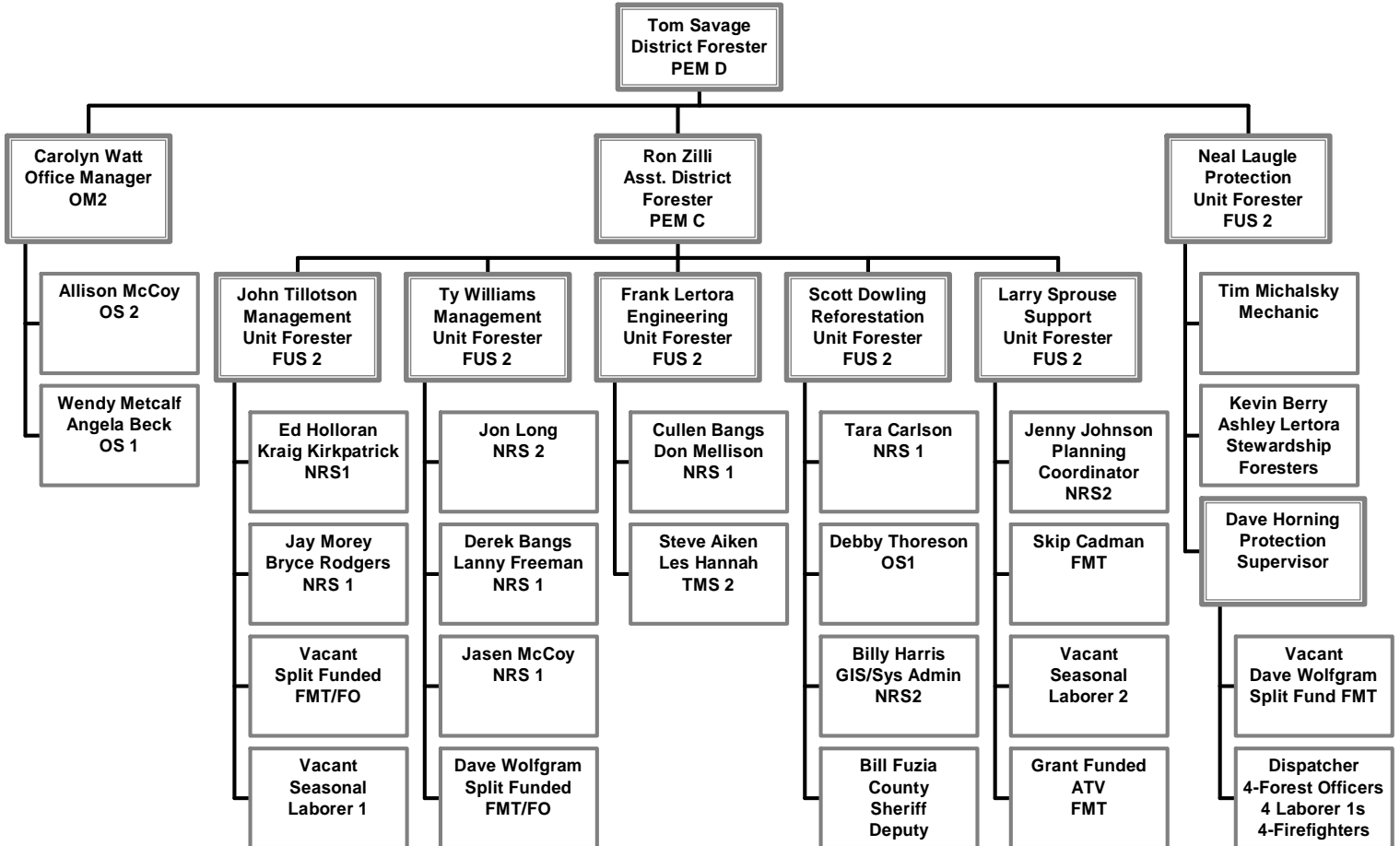
The **Engineering Unit** is responsible for the road and project engineering support, establishment and maintenance of property line surveys, and supervision of the district road maintenance crew.

The **Forest Management Units**, which include the Jewell Unit (central Clatsop County) and the Sunset Unit (remaining state forest lands along the western and northern portions of Clatsop County), are responsible for the planning, preparation and administration of all State Forest timber sales.

The **Reforestation Unit** is responsible for all the planning, prescription determination and administration of all reforestation and young stand management activities on State Forest land, including all the associated monitoring and record keeping. Additionally, this unit oversees district computer network administration, GIS coordination, and the Clatsop County deputy sheriff.

The **Support Unit** contains the recreation program, threatened and endangered (T&E) species tracking and coordination, and general planning coordination/support. The recreation program staff is responsible for the planning and development of new trails and facilities; management of existing trails and facilities (campgrounds, trailheads); development and management of volunteer programs; education and interpretation programs; and monitoring and assessment of overall recreational use patterns.

ASTORIA DISTRICT ORGANIZATION June, 2009



APPENDIXES

- A. Summary Tables
- B. Pre-Operations Reports
- C. Vicinity Map of 2010 Sales
- D. Public Involvement

TABLE A-1: COMMERCIAL FOREST MANAGEMENT OPERATIONS - FINANCIAL SUMMARY

District: Astoria

Fiscal Year: 2010

Date:

6/30/09

Operations	Payment Type	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
		BOF	CSL			Partial Cut	Regen	Con-ifer	Hard-woods	Total	Gross	Projects	Net
Primary Operations													
Buck Ranch	Recovery	100%	0%	Clatsop	2	80	75	5.5	0.1	5.6	\$1,012,500	\$39,750	\$972,750
California Elk	Recovery	100%	0%	Clatsop	1	30	103	6.7	0.6	7.3	\$1,155,000	\$141,400	\$1,013,600
Courtside	Recovery	100%	0%	Clatsop	1	0	55	2.2	0.0	2.2	\$444,000	\$0	\$444,000
Greasy Alder	Recovery	100%	0%	Clatsop	1	0	64	0.3	0.8	1.1	\$236,517	\$45,909	\$190,608
Happy Gilmore	Recovery	100%	0%	Clatsop	4	90	0	0.6	0.0	0.6	\$80,000	\$28,120	\$51,880
Leonard Elk	Recovery	100%	0%	Clatsop	1	0	179	7.4	0.4	7.8	\$1,215,000	\$212,000	\$1,003,000
Modified Green	Recovery	100%	0%	Clatsop	1	45	76	3.6	0.0	3.6	\$540,000	\$116,065	\$423,935
Mombo Combo	Recovery	100%	0%	Clatsop	2	20	134	6.0	0.3	6.3	\$1,275,000	\$148,400	\$1,126,600
Sprague's Stump	Recovery	100%	0%	Clatsop	4	90	208	8.5	0.9	9.4	\$1,558,000	\$130,240	\$1,427,760
Summit Combo	Recovery	100%	0%	Clatsop	3	0	91	3.6	0.2	3.8	\$493,150	\$75,000	\$418,150
Wallhanger	Recovery	100%	0%	Clatsop	3	250	84	5.0	0.8	5.8	\$950,000	\$273,000	\$677,000
Winslow	Recovery	100%	0%	Clatsop	3	0	157	7.5	0.0	7.5	\$1,350,000	\$111,000	\$1,239,000

AOP Total:		605	1,226	56.9	4.1	61	\$10,309,167	\$1,320,884	\$8,988,283
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Alternate Operations

Alderberry	Recovery	100%	0%	Clatsop	Alt.	0	62	0.25	0.9	1.2	\$275,000	\$52,980	\$222,020
Foster's 40	Recovery	100%	0%	Clatsop	Alt.	189	130	6.8	0.9	7.7	\$1,517,000	\$137,960	\$1,379,040
Green Giant	Recovery	100%	0%	Clatsop	Alt.	172	139	7.8	0.1	7.9	\$1,507,170	\$324,700	\$1,182,470
Haggis Hunt	Recovery	100%	0%	Clatsop	Alt.	0	53	1.5	0.0	1.5	\$300,000	\$40,000	\$260,000
Hubbub	Recovery	100%	0%	Clatsop	Alt.	0	125	2.1	1.7	3.8	\$846,800	\$127,780	\$719,020
Ice Box Thinning	Recovery	100%	0%	Clatsop	Alt.	483	62	4.8	0.0	4.8	\$720,000	\$206,825	\$513,175
Lion's Lair	Recovery	100%	0%	Clatsop	Alt.	0	126	3.3	1.0	4.3	\$908,600	\$40,480	\$868,120
Moore Mullenbach	Recovery	100%	0%	Clatsop	Alt.	0	39	1.0	0.2	1.2	\$257,100	\$32,660	\$224,440
Mulak Thin	Recovery	100%	0%	Clatsop	Alt.	55	0	0.4	0.1	0.5	\$68,750	\$4,560	\$64,190
Puma Punch	Recovery	93%	7%	Clatsop	Alt.	43	67	2.5	0.7	3.2	\$675,000	\$35,000	\$640,000
Rapid Rewards	Recovery	100%	0%	Clatsop	Alt.	139	0	0.9	0.0	0.9	\$121,625	\$36,560	\$85,065
White Noise	Recovery	100%	0%	Clatsop	Alt.	304	29	2.5	0.0	2.5	\$375,000	\$73,500	\$301,500

Total:		1,385	832	33.85	5.55	39.4	\$7,572,045	\$1,113,005	\$6,459,040
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TABLE A-2: TIMBER HARVEST OPERATIONS - FOREST STRUCTURE SUMMARY									
District: ASTORIA		Fiscal Year 2010			Date: 06/30/2009				
Primary Operations	Area	Net Acres			Stand Structure Development Pathway			Structural Components Green Trees/Acre	Comments
		Clearcut	Partial Cut	Total	Current	Post-Harvest	Desired		
Buster Basin									
Buck Ranch	1	75	0	75	UDS	REG	GEN	5	
	2	0	80	80	UDS	LYR	GEN		
Winslow	1	67	0	67	UDS	REG	GEN	5	
	2	35	0	35	UDS	REG	GEN	5	
	3	55	0	55	UDS	REG	GEN	5	
Davis Basin									
Wallhanger	1	0	250	250	CSC/UDS	LYR/UDS	OFS		
	2	42	0	42	UDS	REG	GEN	5	
	3	42	0	42	UDS	REG	GEN	5	
Fishhawk Basin									
Mombo Combo	1	35	0	35	UDS	REG	GEN	5	
	2	41	0	41	UDS	REG	GEN	5	
	3	58	0	58	LYR	REG	GEN	5	
	4	0	20	20	LYR	LYR	LYR		
Hamilton Basin									
Happy Gilmore	1	0	80	80	UDS	LYR	LYR/OFS		
	2	0	10	10	UDS	LYR	LYR		
Summit Combo	1	37	0	37	CSC	REG	GEN	5	
	2	18	0	18	CSC	REG	GEN	5	
	3	36	0	36	UDS	REG	GEN	5	
Klaskanine Basin									
California Elk	1	0	30	30	UDS	LYR	LYR		
	2	48	0	48	LYR/UDS	REG	GEN	5	
	3	55	0	55	LYR	REG	GEN	5	
Leonard Elk	1	42	0	42	LYR/CSC	REG	GEN	5	
	2	62	0	62	LYR	REG	GEN	5	
	3	75	0	75	LYR	REG	GEN	5	
Northrup Basin									
Greasy Alder	1	16	0	16	UDS	REG	GEN	5	
	2	48	0	48	UDS	REG	GEN	5	
Sprague's Stump	1	0	90	90	UDS	UDS	GEN		
	2	106	0	106	UDS	REG	GEN	5	
	3	48	0	48	UDS	REG	GEN	5	
	4	54	0	54	UDS	REG	GEN	5	
Quartz Basin									
Courtside	1	43	0	43	LYR	REG	GEN	5	
	2	12	0	12	LYR	REG	GEN	5	
Scattered Basin									
Modified Green	1	7	0	7	CSC	REG	GEN	5	
	2	9	0	9	CSC	REG	GEN	5	
	3	0	45	45	CSC/LYR	UDS/LYR	GEN		
	4	60	0	60	CSC	REG	GEN	5	
Total		1226	605	1831					

TABLE A3: FOREST ROADS SUMMARY

District: Astoria

Fiscal Year: 2010

Date: 06/30/2009

Primary Operations	Construction		Improvement		Other Projects	Total Project Costs	Gross Value of Operation	Total Cost as a percent of Gross Value	Comments
	Miles	Cost	Miles	Cost					
Buck Ranch	0.25	\$11,750	2.30	\$28,000	\$0	\$39,750	\$1,012,500	3.9%	
California Elk	0.60	\$34,400	7.00	\$70,000	\$37,000	\$141,400	\$1,155,000	12.2%	
Courtside	0.00	\$0	0.00	\$0	\$0	\$0	\$444,000	0.0%	
Greasy Alder	1.00	\$45,909	0.00	\$0	\$0	\$45,909	\$236,517	19.4%	
Happy Gilmore	0.40	\$8,400	1.90	\$19,000	\$720	\$28,120	\$80,000	35.2%	
Leonard Elk	1.20	\$64,000	5.00	\$50,000	\$98,000	\$212,000	\$1,215,000	17.4%	
Modified Green	1.25	\$52,250	2.00	\$20,000	\$43,815	\$116,065	\$540,000	21.5%	
Mombo Combo	1.50	\$57,500	4.50	\$90,000	\$900	\$148,400	\$1,275,000	11.6%	
Sprague's Stump	2.70	\$106,660	1.10	\$16,240	\$7,340	\$130,240	\$1,558,000	8.4%	
Summit Combo	0.90	\$42,300	1.80	\$32,700	\$0	\$75,000	\$493,150	15.2%	
Wallhanger	3.00	\$157,000	3.00	\$60,000	\$56,000	\$273,000	\$950,000	28.7%	
Winslow	1.30	\$48,100	3.10	\$62,000	\$900	\$111,000	\$1,350,000	8.2%	
Total:						\$1,320,884	\$10,309,167	12.81%	
Alderberry	0.20	\$6,800	4.60	\$46,000	\$180	\$52,980	\$275,000	19.3%	
Foster's 40	1.70	\$61,700	5.50	\$75,000	\$1,260	\$137,960	\$1,517,000	9.1%	
Green Giant	2.10	\$98,700	3.80	\$76,000	\$150,000	\$324,700	\$1,507,170	21.5%	
Haggis Hunt	0.00	\$0	2.00	\$40,000	\$0	\$40,000	\$300,000	13.3%	
Hubbub	0.90	\$26,700	11.50	\$100,000	\$1,080	\$127,780	\$846,800	15.1%	
Ice Box Thinning	2.50	\$117,500	1.70	\$30,000	\$59,325	\$206,825	\$720,000	28.7%	
Lion's Lair	1.00	\$31,400	0.00	\$0	\$9,080	\$40,480	\$908,600	4.5%	
Moore Mullenbach	0.40	\$8,400	0.30	\$3,000	\$21,260	\$32,660	\$257,100	12.7%	
Mulak Thin	0.20	\$4,200	0.00	\$0	\$360	\$4,560	\$68,750	6.6%	
Puma Punch	0.50	\$20,000	1.00	\$15,000	\$0	\$35,000	\$675,000	5.2%	
Rapid Rewards	0.2	\$4,200	3.2	\$32,000	360	\$36,560	\$121,625	30.06%	
White Noise	0.5	\$23,500	2.5	\$50,000	0	\$73,500	\$375,000	19.60%	
Total:						\$1,113,005	\$7,572,045	14.70%	

Table A4: REFORESTATION AND YOUNG STAND MANAGEMENT REPORT

District: Astoria

Fiscal Year: 2010

Date: 06/30/2009

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	2,000	\$183.76	\$376,530.00			\$0.00	2,000	\$376,530.00
Interplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Underplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Tree Protection-Barriers	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Tree Protection-Direct Control ²	900	\$0.00	\$0.00			\$0.00	900	\$0.00
Site Prep-Chemical- Aerial	245	\$85.00	\$20,825.00			\$0.00	245	\$20,825.00
Site Prep-Chemical- Hand	483	\$120.00	\$57,960.00			\$0.00	483	\$57,960.00
Site Prep -Slash Burning ³	280	\$0.00	\$0.00			\$0.00	280	\$0.00
Site Prep -Mechanical ³	280	\$0.00	\$0.00			\$0.00	280	\$0.00
Fertilization	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Noxious weeds	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release-Chemical- Aerial	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release,-Chemical-Hand	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release-Mechanical-Hand ¹	943	\$0.00	\$0.00			\$0.00	943	\$0.00
Precommercial Thinning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Pruning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Other - Roadside Vegetation Control	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Totals	5,131		\$455,315.00			\$0.00	5,131	\$455,315.00

*Planting costs include all costs including seedlings.

¹ Due to budget reductions some of the planned management activities listed will be conducted by South Fork inmate crews in order to reduce costs.

²Direct Control for this AOP consists of Mountain Beaver trapping conducted by South Fork inmate crews.

³Slash burning and mechanical site prep. will be accomplished through timber sale contracts.

Table A-5: RECREATION PROJECT MANAGEMENT SUMMARY

District: **ASTORIA**

Fiscal Year: **2010**

Date: **06/30/2009**

Operation	Unit of Measure	Current	Construction/ Project Design	Construction/ Project Design Cost (Funding) ODF	Improvement Projects	Improvement Cost (Funding) ODF	Facility Maintenance	Facility Maintenance ODF	Other	Total Cost	Comments
Facilities											
Campsites	Sites	56					3	\$2,000		\$2,000	Facility Maintenance of H.R. Spruce Run, Gnat Creek, Northrup Creek, and Dispersed Sites.
Day Use Areas		4									
Trailheads		5									
Interpretive Sites		1									
OHV Program	Sites	1						\$1,500		\$1,500	ATV Maintenance
Miscellaneous											
Trails											
Non-Motorized	Miles	18.0									
Motorized	Miles	0.0	2.0	ATV Grant						ATV Grant	
Contracts											

Total: **\$3,500**

Table A-6: SALMON ANCHOR HABITAT HARVEST SUMMARY

District: Astoria

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
Buster Creek	10,885	25%	2,721	0	2,143	5%	544	0	206
Fishhawk Lake Creek	5,984	100%	5,984	154	2,190	7%	419	134	361
Upper North Fork Nehalem	9,920	100%	9,920	0	515	7%	694	0	176
Upper Rock Creek	3,502	100%	3,502	0	1,336	7%	245	0	172
Coal Creek	175	30%	52.5	0	0	25%	43.75	0	0

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

2. These columns summarize the operations planned and conducted during the period beginning July 1, 2001. This period includes the 2002 through 2010 Fiscal Years.

Only includes acres for Primary Operations . Alternate Operations are not included.