

Department of Forestry

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June 28, 2016

To: Andy White, Area Director

From: Dan Goody, Astoria District Forester

CC: Liz Dent, State Forests Division Chief

Brian Pew, State Forests Deputy Division Chief Ron Zilli, State Forests Operations Coordinator

Re: Information Item – Approved Annual Operations Plan for FY 2017

The FY 2017 State Forests Annual Operations Plan (AOP) for the Astoria District has been completed. During my review of this plan, I have found that it conforms to the Oregon Forest Practices Act and is consistent with the 2010 Northwest Oregon State Forest Management Plan, the 2011 District Implementation Plan, the 2017 Annual Operation Planning Standards and Guidance, and the FY 2017 State Forests budget instructions.

During its preparation, this plan was reviewed by technical specialists from within the department, biologists from the Oregon Department of Fish and Wildlife and archeologists from the Oregon Department of Transportation. The draft AOP also underwent a 45-day public comment period. All comments were carefully considered and incorporated where appropriate. All changes that have occurred since the public comment period ended are summarized in Appendix D of the AOP.

As prepared, this AOP consists of 72.7 MMBF of harvest volume. This volume will be achieved through 568 acres of partial cut harvest and 1,651 acres of regeneration harvest. The operations are estimated to generate gross revenues of approximately \$25,441,899 and net revenues of \$23,292,786 within Clatsop County.

Approval of this plan does not constitute final approval of individual project details. Individual operations are subject to additional review processes at the district and program staff level before implementation. The planned amount and location of all management activities are based on the latest site-specific assessments and estimates of operational, T&E surveys and market variables. Management activity levels may be adjusted and modified to account for any significant changes to these variables. The district has included nine alternate operations in this Annual Operations Plan. These alternate operations may be used to replace regular sales that cannot be completed as

planned.

The official copy of this AOP will be on file at the district office. Additional copies are available at the State Forests Program office in Salem, and are also available on the ODF web site at:

http://www.oregon.gov/ODF/Pages/Reports.aspx

Approved:

Dan Goody

Astoria District Forester

ASTORIA DISTRICT

2017 ANNUAL OPERATIONS PLAN

OVERVIEW

This plan describes the activities and outcomes that Oregonians can expect to see on the Clatsop State Forest in 2017.

The Clatsop State Forest is an actively managed forest, valued by many Oregonians for its mixture of environmental, economic, and social benefits. This plan supports this mixture and provides a balance of these benefits as required by Oregon Administrative Rule (OAR 629-035-0020). We strive to manage the forest sustainably, so that the benefits from the forest can be delivered into perpetuity. The forest harvesting is planned at a sustainable level; a level that our computer models suggest can be harvested year after year without reduction.

The forest has a mixture of habitat types for all of Oregon's native wildlife. Recreational opportunities are diverse and high quality, allowing for off-highway vehicles, bicycling, hiking, hunting, fishing, horseback riding, and more, striving to minimize user and environmental conflicts in the context of a working forest.

Managing a large public forest has its challenges. In addition to the challenges of providing the opportunities described above, the forest is expected to be financially self-supporting. About two - thirds of the revenues from state forest timber sales go to local counties and other taxing districts, including schools. Oregon Department of Forestry (ODF) uses the remaining third of the revenue to manage the forests and keep them healthy, through activities including fire protection, tree planting, thinning, research and monitoring, recreation services, road maintenance and stream improvement.

Every year in the Clatsop State Forest, we learn new things and find new challenges and opportunities. In preparing this plan, we have consulted with geotechnical specialists, wildlife biologists, fish biologists, aquatic specialists, engineers, adjacent landowners, and a variety of interest groups.

Over the past two months, ODF requested review and comments on our plan from others, including the Forest Trust Land Advisory Committee (representing the counties that deeded land to ODF), the State Forests Advisory Committee (SFAC - composed of Oregonians representing many interests), Oregon Department of Fish and Wildlife, the US Fish and Wildlife Service, motorized and non-motorized recreation users, hunters, fishermen, and wildlife advocates, as well as Oregonians in general. Comments received and our responses to those comments can be found in Appendix D.

It was through this collaborative approach that we can finalize this AOP as one we are confident will meet the ODF goals; achieving the greatest permanent value for the citizens of Oregon.



A short summary of activities planned for the coming year:

- Prepare timber sales to harvest approximately 73 million board feet of timber volume, through
 modified clearcut and partial cut harvest, generating revenue of over 23 million dollars. This harvest
 level is in alignment with longer term plans and modeling to ensure it is sustainable and promotes
 the development of a mixture of habitat types across the landscape.
- Of the 23 million in revenue, Clatsop County will receive approximately two-thirds or 15 million dollars
 to distribute to various taxing districts within the County. The Department of Forestry will receive the
 remaining one-third or 8 million dollars.
- Planting approximately 600,000 trees on 1,400 acres within the Clatsop State Forest.
- Protecting streams and water resources through a series of buffers and seasonal restrictions.
- Habitat development projects such as, retaining green trees in clearcut areas, and leaving down wood and snags, all for wildlife benefits in harvest areas and future forests.
- Maintain approximately 950 mile road network that provides access for timber harvest, various recreational opportunities and fire suppression.
- Conduct over 6,000 individual surveys for northern spotted owls.
- Conduct approximately 300-400 (survey planning is ongoing) individual surveys for the marbled murrelet.
- Stream improvement projects. An initial screen suggests that streams near five planned harvest units could benefit from large wood additions to the stream system. These streams will be reviewed further during sale layout to confirm the large wood placement plan.
- Vacate or block approximately 0.9 miles of existing road to enhance watershed health.
- Operate and maintain the following developed facilities in a safe, clean, and responsible manner:
 - Five campgrounds
 - One dispersed recreation area
 - Eight dispersed camp sites
 - Two interpretive sites
 - Seven trailhead facilities
- Provide a safe and clean environment for the myriad of dispersed activities that occur across the forest hunting, camping, angling, sight-seeing, target shooting, swimming, mushroom picking, etc.
- Maintaining, managing, and patrolling the motorized and non-motorized trail networks, striving to
 protect the trail investments, provide for user safety, address developing trail issues, and protect
 water quality.
- Continue to provide firewood cutting and special forest products (salal, mushrooms, etc.) permits.

TABLES OF CONTENTS

n	tegrated Forest Management Operations1
	Timber Harvest Operations1
	Overview of Timber Harvest Operations1
	Harvest Operations within Terrestrial Anchor Sites and Aquatic Anchors2
	Summary of Timber Harvest Operations by Basin4
	Forest Roads Management10
	Overview10
	Road Construction
	Road Improvement11
	Road Access Management11
	Other Road Management Activities11
	Road Maintenance11
	Land Surveying11
	Young Stand Management12
	Site Preparation12
	Planting12
	Vegetation Management13
	Tree Protection
	Precommercial Thinning
	Invasive/Noxious Weed Management14
	Pruning14
	Stocking Surveys14
	Recreation Management14
	Overview of Recreation Management14
	Motorized Recreation Operations/Maintenance
	Non-Motorized Recreation Operations/Maintenance
	Other Recreation Management Activities16

ı

L	and Exchange	17
C	Other Integrated Forest Management Operations	17
	Public Woodcutting	17
	Special Forest Products	18
Plan	ning (and Information Systems)	18
	Stand Level Inventory and Other Vegetation Inventories	18
	Fish and Wildlife Surveys	18
	Aquatic and Riparian Resources	20
Publ	lic Information and Education	21
Adm	ninistration	21
Dist	rict Organizational Chart	23
APP	PENDIXES	24
A	A. Summary Tables	
В	3. Maps	
C	C. Consultation with Other State Agencies	
D	D. Public Involvement	
E	E. Pre-Operations Reports (Available upon Request)	
F	Landscape Design Modification (major)	
G	6. Harvest Acre Range Modification (minor)	
Н	I. Forest Land Management Classification Changes (major)	

INTRODUCTION

This annual operations plan (AOP) outlines activities planned on state-owned forestland managed by the Astoria District for Fiscal Year 2017 (FY17), which begins July 1, 2016 and ends June 30, 2017. 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)*, and the Astoria District Implementation Plan (IP).

The AOP document is divided into five major categories: Integrated Forest Management; Planning and Information Systems; Public Information and Education; Administration and Appendices.

The proposed operations and activities are planned to be designed, engineered, and submitted for processing during the FY17 time period. Actual on-the-ground operations will likely not occur during FY17 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 FY2017. This draft AOP has undergone a 45-day public comment period which was held from April 4, 2016 through May 18, 2016. Appendix E, found in the final AOP, outlines the changes made after the public comment period.

Accomplishments of forest management activities that occurred under previous AOPs can be found in several reports, including the *State Forester's Annual Report for the Association of Oregon Counties*, the *Common School Forest Lands Annual Report*, and individual district annual reports (these reports also cover the accomplishments of the Fire Protection and Private Forests Programs). These reports are available through the local district office or online at: http://www.oregon.gov/ODF/Pages/Reports.aspx

This AOP, as prepared, aligns with a proposed Implementation Plan modifications to the District Landscape design described in Appendix "F" and the resulting Forest Land Management Classification modifications described in Appendix "H". These proposed modifications require a 30 day public comment period which was held in conjunction with the Districts 2017 AOP public comment period. This AOP is also consistent with a proposed minor modification to the harvest acre ranges identified in the District Implementation Plan; this modification is described in Appendix "G".

^{*&}quot;Major changes and the procedures for making these changes are described in OAR 629-035-0060

^{**}The State Forests' individual district annual reports are available on the Oregon Dept. of Forestry website under

[&]quot;Publications." You can access here: http://www.oregon.gov/odf/Pages/pubs/publications.aspx

Integrated Forest Management Operations

<u>Timber Harvest Operations</u>

Overview of Timber Harvest Operations

This AOP contains 13 primary operations comprised of 586 acres of partial cut harvests and 1,651 acres of regeneration harvest. The operations range in timber volume from 2.6 to 14.9 million board feet (MMBF) and have an estimated gross revenue of approximately \$25.4 million dollars. Net revenues are estimated to be \$23.3 million dollars. A detailed financial summary is included in Appendix B.

FY 2017 AOP guidance directs the Astoria District to achieve 73 MMBF. At this time, primary operations planned will achieve 72.7 MMBF. Planned volumes for each operation can be seen in Appendix B.

As planned, these operations are estimated to primarily contain conifer species. Hardwoods are not anticipated to make up a significant amount of volume. Operations will be conducted on approximately 1.6% of the district's total acres. Of this 1.7%, approximately 0.4% is partial cut harvest and 1.2% is regeneration harvest.

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

Silvicultural Activity	IP Annual	2017 AOP	
	Low	High	Objective
Partial Cut Harvest	100	2,800	586
Regeneration Harvest	285	2,200	1,651

The IP Annual Objective acreage will be modified to these ranges as a minor IP modification in 2016 by the Astoria District Forester (Appendix G).

Stands designated for regeneration harvest in this operations plan fit into one or more of the following situations: highly marketable stands, 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, and stands in areas that would provide an opening in the landscape to temporarily serve as big game foraging habitat and increase landscape diversity.

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.

Structural components may be retained at higher levels in some units and at lower levels in other units. The intent is 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 are generally based on SLI data for the sale areas. The estimates of the post-harvest expectations are based on ocular estimates, past contracts, monitoring results, or SLI data for that basin. During sale layout, cruise data gives a more recent account of the number of existing snags per acre. It is from the current cruise information that the remaining number of snags needed is tallied. If needed, additional green trees will be marked as wildlife trees for future snag recruitment or trees may be topped or girdled. It is rare that the conifer downwood requirements of 600-900 cubic feet per acre cannot be met, however, this type of situation would be where a higher amount of downwood would be left on another unit in the basin making up for the lower levels in the hardwood stand. A District analysis of downwood and snags is typically done annually to monitor the landscape level goals.

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 12 in the IP, page 73).

All of the Primary and Alternate harvest operations and many of the other forest management activities have been reviewed by ODF's wildlife biologists, aquatic specialist, geotechnical specialist, road engineer, operations coordinator, fish and wildlife biologists from the Oregon Department of Fish and Wildlife. Information on operations that occur within the provincial circle of a northern spotted owl has been provided to the US Fish and Wildlife Service. Occasionally, operations may contain a resource or activity that needs to be reviewed by another state agency, such as the Department of Agriculture or the Department of State Lands. Written comments from the external resource specialists can be found in Appendix C.

Oregon Department of Transportation's (ODOT) State Archaeologist conducted a cultural resource review of all the operations planned in this AOP. A screen was done to determine if: any of the operational areas had been previously surveyed for archaeological resources utilizing the State Historic Preservation Office database; an archaeological resource was within the operational area and/or within a quarter mile from the operational area; or the General Land Office (GLO) maps from the 1850's – 1900's contained any insight into historic sites that existed back in those years.

For this AOP, the Archaeological review revealed no resource sites within any of the planned operations or within a quarter mile of any of the planned operations. There were, however, four operations where remnants of a trail and/or house remains may exist. The locations of these are not exactly known or mapped. Our foresters will continue to look out for artifacts during sale layout and report any findings to the ODOT Archeologist for review and recommended protection measures.

Some smaller scale operations targeting infrastructure maintenance may also produce timber volume during the 2017 fiscal year. These small operations are not included as part of the AOP because they affect a very small area, produce little volume or revenue, and do not require significant effort to develop and execute. For example, a sale may be set up to thin the trees in an ODF Campground to remove unsuitable trees, improve safety and improve growing conditions for the remaining trees. Several other sales may remove trees adjacent to main haul roads to allow roads to dry and improve drainage. These sales will be less than \$100,000 in value and comply with all policies, rules, and plans.

Harvest Operations within Terrestrial Anchor Sites and Aquatic Anchors

The State Forests' Species of Concern Strategies specifically identifies fish and wildlife species of concern on the Clatsop State Forest. Two of these strategies are incorporating Terrestrial Anchor Sites (TAS) and Aquatic Anchor (AA) sites into the forest.

- Terrestrial Anchor Sites (TAS): are areas intended to benefit terrestrial wildlife species of
 concern; especially those associated with older forest or interior habitat conditions, sensitive to
 forest fragmentation, or do not readily disperse across younger forest conditions. Management
 within TAs is intended to develop larger patches of mature forest conditions, to emulate natural
 small-scale disturbance patterns, and to minimize short-term negative impacts to habitat.
 Harvest will mostly consist of thinnings but small regeneration harvest areas and/or retention
 cuts will be used at times to emulate natural small-scale disturbances. ODF biologists will be
 consulted when patch cuts and/or retention cuts will be used within TA's.
- Aquatic Anchor (AA): sites are watersheds where salmon and aquatic amphibian
 conservation is of concern. Riparian management strategies beyond those described in the
 FMP will be applied within AAs. In addition, areas designated for the development of complex
 structure in the Landscape Design are clustered around streams important to fish in the AA.

The Species of Concern Strategies provide long term goals for TAS and AA. Any management activities within those areas are designed to achieve those goals. These strategies have not identified

specific limits to the total area that can be harvested within these areas; however, the district and resource specialist will be tracking the harvest trends within these areas.

The TAS comprise approximately 8% of the Astoria District. It's important in selecting stands for harvest and developing prescriptions in these areas to ensure these harvest activities achieve the goals of the TAS. Table 1B summarizes harvest operations within the TAS since the strategy was adopted (AOPs 2012 through 2017).

In this AOP, there will be no harvest within any of the TAS on the Astoria District.

Table 1B. Summary of Harvest Operations within TAS (Acres and Percent)

Acres within TAS	Current A	OP (2017)	Cumulative Harvest (Since 2012)						
	Clearcut	Partial Cut	Clearcut	Partial Cut					
Entire District (136,826 Ac.)	1,651	586	5,632	5,610					
% of District Acres	1.2%	0.5%	4.1%	4.1%					
Buster (4,598 Ac.)	-	-	-	-					
% of TAS Acres	-	-	-	-					
Plympton (4,075 Ac.)	-	-	-	70					
% of TAS Acres	-	-	-	1.7%					
Sweethome (2,274 Ac.)	-	-	10	121					
% of TAS Acres	-	-	0.4%	5.3%					
All TAS (10,947 Ac.)	-	-	10	191					
% of all TAS Acres	0.0%	0.0%	>1%	1.7%					

The AAs comprise approximately 23% of the Astoria district. The AA strategies focus on protection of riparian areas within the AA watersheds. Harvest in these basins require additional stream buffers contributing towards longer term riparian protection. Since the boundaries of these anchors are watersheds, these anchor basins cross lands not managed by ODF. Of the five anchor basins in the Astoria District, two are almost completely on District ownership and three have acreage on other ownerships. In this AOP, 2.3% (722 acres) of all AAs on the Astoria district will be modified clearcut and 0% (0 acres) will be partial cut.

Table 1C. Summary of Harvest Operations within AA (acres and percent)

	thin AA's - Astoria District only)	Current AC	OP (2017)	Cumulative Harvest (Since FY 2014)				
		Clearcut	Partial Cut	Clearcut	Partial Cut			
Entire District (136,8	326 Ac.)	1,651	586	6,093	4,202			
	% of District Acres	1.2%	0.5%	4.5%	3.1%			
Northrup Creek	(7,207 Ac.)	-	-	275	-			
	% of ODF Acres	-	-	3.8%	-			
Buster Creek	(10,874 Ac.)	327	-	614	440			
	% of ODF Acres	3.0%	-	5.6%	4.0%			
Upper Rock Creek	(3,498 Ac.)	59	-	59	-			
	% of ODF Acres	1.7%	-	1.7%	-			
Upper North Fork N	ehalem(9,908 Ac.)	336	-	472	460			
	% of ODF Acres	3.4%	-	4.8%	4.6%			

Coal Creek	(183 Ac.)	-	-	-	-
	% of ODF Acres	-	-	-	-
All Aquatic Anchors	(31,670 Ac.)	722	0	1,590	1,008
	% of ODF Acres	2.3%	0%	5.0%	3.2%

Summary of Timber Harvest Operations by Basin

In the following section, the commercial forest management operations planned for FY 2017 will be summarized in the context of the 17 management basins on the Astoria District. ODF and ODFW resource specialists reviewed the FY 2017 operations plan and provided input. Individual pre-operation reports include information on riparian protection and structural components such as snags, down woody debris, and green tree retention (these reports are available upon request). 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 2. Summary of Timber Harvest Operations in each basin. All values are in net acres.

Basin	201	7 AOP
Dasiii	Partial Cut	Clearcut
Astoria	0	0
Beneke	0	164
Buster	0	254
Crawford	119	33
Davis	291	12
Fishhawk	0	0
Gnat	0	93
Hamilton	0	117
Klaskanine	0	0
Lousignot	0	0
N. Fork Nehalem	0	0
Northrup	0	0
Plympton	0	0
Quartz	0	231
Sager	176	387
Scattered	0	0
Sweethome	0	360
Total	586	1,651

Descriptions of operations occurring in each basin can be found below. In each basin where harvest will be occurring, the expected change in the current condition is noted. Changes in CSC, UDS, LYR and OFS are estimated to occur 5-10 years post-harvest. The harvest occurring in each basin during FY17 is within the anticipated trajectory towards the DFC goal for that basin. The DFC goals for each basin are outlined in the Astoria District Implementation Plan. Harvest acreage does not include right-of-way acres for new road construction.

ASTORIA BASIN

There are no primary harvest operations planned in this basin for FY 2017.

Boiler Fleet Combo (Alternate Operation): This operation is comprised of five modified clearcut units totaling 188 acres and six partial cut units totaling 157 acres. The modified clearcut units range from 39-51 years old. The current condition of the stands are CSC with 17 acres of UDS in Area 1, and the majority of Area 11 is currently LYR. The DFC for all of the modified clearcuts is General. The partial cut units are approximately 35 years old the majority which are currently in the CSC condition; with Area 6 and Area 8 currently LYR. The DFC for the partial cuts is General. Due to the stand age and condition the partial cuts will be a first entry thinning aimed at maximizing tree growth for the future.

BENEKE BASIN

<u>Tone Deaf:</u> This operation consists of three modified clearcut units totaling 164 acres. The stands range from 71-77 years in age and are currently a mixture of the UDS and LYR condition. The DFC is General. The stands will be harvested and replanted with a mixture of conifer species.

BUSTER BASIN

<u>Emerald Isle:</u> This operation consists of three modified clearcut units totaling 155 acres. The stands range from 75-82 years old and are currently a mixture of LYR and UDS condition. The DFC for all sale areas is General. The stands will be harvested and replanted with a mixture of conifer species.

This operation is within the Buster Creek Aquatic Anchor (AA). As a result, all Type F, and large and medium Type N streams within the AA will have a 100 foot no-harvest buffer and all small, perennial, debris flow-prone, and high-energy Type N streams within the AA will have a 50 foot no-harvest buffer.

<u>Higher Wage (Areas 1 & 2):</u> This operation consists of five modified clearcut areas totaling 294 acres. The stands range from 75-82 years old and are currently a mixture of LYR and UDS condition. The DFC for all sale areas is General. These areas will be harvested and replanted with a mixture of conifer species. Areas 3, 4 & 5 are within the Sager Creek basin.

Areas 1, 2 and 3 are within the Buster Creek Aquatic Anchor (AA). As a result, all Type F, and large and medium Type N streams within the AA will have a 100 foot no-harvest buffer and all small, perennial, debris flow-prone, and high-energy Type N streams within the AA will have a 50 foot no-harvest buffer.

Oswego Area 1 – (Alternate Operation): This operation consists of two modified clearcuts totaling 139 acres. Area 1 is currently a mixture of UDS and LYR, while Area 2 is UDS. After harvest both sale areas will be replanted with a mixture of conifer species, allowing for a variety of future management options. The DFC of both sale areas is General. (Area 2 of this sale is within the Quartz Basin)

CRAWFORD BASIN

<u>Crawfish Corner:</u> This operation consists of two partial cut units totaling 119 acres and one modified clearcut totaling 33 acres. The partial cut units are approximately 35 years old and are currently in the LYR and UDS condition. Due to the stand age and condition this will be a first entry thinning aimed at maximizing tree growth for the future. The DFC for both areas is General. The modified clearcut is approximately 78 years old and in the UDS condition. The stands will be harvested and replanted with a mixture of conifer species. The DFC for all sale areas is General.

DAVIS BASIN

<u>Petersen Heights:</u> This operation consists of one modified clearcut totaling 12 acres and two partial cuts totaling 291 acres. Area 2 is a modified clearcut that is approximately 50 years of age. The current condition is UDS with a DFC of General. Areas 1 and 3 are partial cut units approximately 34-55 years old. Area 1 has a current condition of UDS and Area 3 has a current condition of CSC and UDS. All sale areas have a DFC of General.

<u>Davis Ridge Combo (Alternate Operation):</u> This operation consists of one modified clearcut unit totaling 24 acres and one partial cut totaling 38 acres. Area 1 is currently in the CSC condition and will be partial cut to capture the competition for growing space mortality that would soon occur. Area 2 is currently LYR and will be modified clearcut and replanted with a mixture of conifer species. The DFC for both sale areas is General.

FISHHAWK BASIN

There are no primary harvest operations planned in this basin for FY 2017.

Sliver Picker (Alternate Operation): This operation consists of two modified clearcut units totaling 51 acres. The current condition of Area 1 is UDS and is LYR for Area 2. After harvest both sale areas replanted with a mixture of conifer species, allowing for a variety of future management options. The DFC of both sale areas is General.

GNAT BASIN

Boot Scoot: This operation consists of one modified clearcut unit totaling 93 acres. The stands are approximately 49 years old and are currently in the UDS condition. The DFC is General. The stands will be harvested and replanted with a mixture of conifer species.

<u>Harkin Larkin (Alternate Operation):</u> This operation consists of two modified clearcut units totaling 110 acres and are primarily in the LYR condition. The vision for both sale areas is to have fully stocked stands that will provide for a variety of future management options. The DFC for both sale areas is General.

HAMILTON BASIN

<u>Saddle Up:</u> This operation consists of two modified clearcut units totaling 117 acres. Area 1 is 46 years old and is currently in the LYR condition. Area 2 is 67 years old and is also currently LYR. Both sale areas have a DFC of General. The stands will be harvested and replanted with a mixture of conifer species.

KLASKANINE BASIN

There are no primary harvest operations planned in this basin for FY 2017.

<u>Cal Barr (Alternate Operation):</u> This operation consists of four modified clearcut units totaling 90 acres, and one moderate partial cut, totaling 52 acres. The modified clearcut units are a mixture of CSC and LYR, although three of the areas were significantly damaged during the windstorm in 2008. They are poorly stocked and have been previously salvaged. What remains of the stands will be harvested and replanted to re-establish a fully stocked, vigorously growing conifer stand. Area 4 is a partial cut that is a mixture of UDS and CSC. The goal of the operation is to harvest the trees that would die out due to competition for growing space with the rest of the stand. The DFC for all sale areas is General.

LOUSIGNOT BASIN

There are no primary harvest operations planned in this basin for FY 2017.

<u>Vesper View (Alternate Operation):</u> This operation consists of two modified clearcuts totaling 80 acres and one partial cut totaling 118 acres. Areas 1 and 2 are currently in the UDS condition. After harvest both sale areas will be replanted with a mixture of conifer species, allowing for a variety of future management options. The DFC of both sale areas is General. Area 3 is currently in the CSC condition. Thinning will be done in order to capture competition mortality. The DFC for Area 3 is General.

NORTH FORK NEHALEM BASIN

There is no harvest planned in this basin for FY 2017.

NORTHRUP BASIN

There is no harvest planned in this basin for FY 2017.

PLYMPTON BASIN

There is no harvest planned in this basin for FY 2017.

QUARTZ BASIN

<u>Sterling Silver:</u> This operation consists of three modified clearcut units totaling 142 acres. The ages of the sale areas range from 65-75 years old. All three areas are currently in the LYR condition with fifteen acres of Area 3 being UDS. The DFC for all areas is General. The stands will be harvested and replanted with a mixture of conifer species.

Portions of Areas 2 and 3 are within the Upper Rock Creek Aquatic Anchor (AA). As a result, all Type F, and large and medium Type N streams within the AA will have a 100 foot no-harvest buffer and all small, perennial, debris flow-prone, and high-energy Type N streams within the AA will have a 50 foot no-harvest buffer.

Fire & Ice: This operation consists of two modified clearcut units totaling 89 acres. The ages range from 54-64 years old and are currently in the LYR & UDS condition. The DFC of these stands are General. After harvest, these stands will be replanted with a mixture of species to allow for a variety of future management options.

Oswego Area 2 (Alternate Operation): This operation consists of two modified clearcuts totaling 139 acres. Area 1 is currently a mixture of UDS and LYR, while Area 2 is UDS. After harvest both sale areas will be replanted with a mixture of conifer species, allowing for a variety of future management options. The DFC of both sale areas is General. (Area 1 of this sale is within the Buster Basin)

<u>Pied Piper (Alternate Operation):</u> This operation consists of three modified clearcut units totaling 114 acres. The sale areas are all currently in the UDS condition. After harvest, all sale areas will be replanted with a mixture of conifer species, allowing for a variety of future management options. The DFC of all the sale areas is General.

SAGER BASIN

<u>Higher Wage (Areas 3, 4, & 5):</u> This operation consists of five modified clearcut areas totaling 294 acres. The stands range from 75-82 years old and are currently a mixture of LYR and UDS condition. The DFC for all sale areas is General. These areas will be harvested and replanted with a mixture of conifer species. Areas 1 & 2 are within the Buster Creek basin.

<u>Tall N Small:</u> This operation consists of four partial cut units totaling 176 acres and four modified clearcut units totaling 196 acres. The partial cut units are approximately 37 years old and currently in the CSC condition. Due to the stand age and condition this will be a first entry thinning aimed at maximizing tree growth for the future. The DFC for all the partial cuts is General. The modified clearcuts range from 71-80 years old and are currently in the UDS condition with the exception of Area 5 which is LYR. The DFC of these stands are General. After harvest, these stands will be replanted with a mixture of species to allow for a variety of future management options.

<u>West Sager (Alternate Operation):</u> This operation consists of two modified clearcuts totaling 58 acres. Area 1 is currently in the CSC condition and Area 2 is currently LYR. After harvest, both stands will be replanted with a mixture of conifer species, allowing for a variety of future management options. The DFC of both sale areas is General.

SCATTERED BASIN

There is no harvest planned in this basin for FY 2017.

SWEETHOME BASIN

<u>Cougar Looper:</u> This operation consists of three modified clearcuts, totaling 190 acres. The stands range from 66-77 years in age. Areas 1 and 2 are currently in the LYR condition, while Area 3 is a mixture of UDS, CSC and LYR. The DFC for all areas is General. After harvest, these stands will be replanted with a mixture of species to allow for a variety of future management options.

This operation is partially within the Upper North Fork Nehalem Aquatic Anchor (AA). As a result, all Type F, and large and medium Type N streams within the AA will have a 100 foot no-harvest buffer and all small, perennial, debris flow-prone, and high-energy Type N streams within the AA will have a 50 foot no-harvest buffer.

Rector Quad: This operation consists of two modified clearcuts totaling 85 acres. Areas 2 and 3 are 64-69 years old. Both sale areas are currently in the UDS condition and have a DFC of General.

Areas 2 and 3 are within the Upper North Fork Nehalem Aquatic Anchor (AA). As a result, all Type F, and large and medium Type N streams within the AA will have a 100 foot no-harvest buffer and all small, perennial, debris flow-prone, and high-energy Type N streams within the AA will have a 50 foot no-harvest buffer.

Rocky Top: This operation consists of one modified clear cut unit totaling 85 acres. The stand is approximately 75 years old and is currently in the LYR condition. The DFC is General. After harvest, these stands will be replanted with a mixture of species to allow for a variety of future management options.

This operation is within the Upper North Fork Nehalem Aquatic Anchor (AA). As a result, all Type F, and large and medium Type N streams within the AA will have a 100 foot no-harvest buffer and all small, perennial, debris flow-prone, and high-energy Type N streams within the AA will have a 50 foot no-harvest buffer.

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

Additionally, Board of Forestry Performance Measures, adopted in 2008 set targets for the State Forests Division to achieve. Performance Measure 5 was specific to road management and is described as follows:

The Board of Forestry Performance Measure #5 directs that the Clatsop State Forest will:

Reduce the miles of hydrologically connected roads to less than 15 percent of the road network within the next ten years, and maintain or improve that level of reduction for the following ten year Reduce the number of road crossings that are barriers to fish passage to less than 2 percent with the next ten years, and maintain or improve that level of reduction for the subsequent ten years.

Project work associated with these sales is anticipated to further the intent of Performance Measure 5:

- Boot Scoot
- Cougar Looper
- Crawfish Corner
- Emerald Isle
- Higher Wage
- Petersen Heights

- Rector Quad
- Rocky Top
- Saddle Up
- Sterling Silver
- Tall N Small
- Tone Deaf

Exact details of each project, such as cross drain locations, are not known at this time and will be further refined upon sale and project field layout.

A summary of estimated values for planned timber operation road and project work activities is shown in the Forest Roads Summary Table, in Appendix B.

Road Construction

The planned harvest operations in this AOP anticipate the construction of 1.2 miles of collector roads and 8.2 miles of Spur roads. Approximately 3% or 0.3 mile is planned to be native earth (dirt) roads. All dirt spurs will be blocked or vacated upon completion of road use. In addition to the blocked dirt spurs, there will be 0.9 mile of spurs vacated.

Therefore, this Operations Plan will increase the amount of active roads by an estimated 8.5 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.

 Approximately 21.8 miles of Collector and 17.35 miles of Spur roads are identified for improvement with planned operations.

Road Access Management

Approximately 0.9 mile of road are identified for closure and/or permanent vacating with these operations, as follows:

Rector Quad: Road closure includes approximately 0.9 mile of rocked spur road.

Old abandoned or legacy type roads 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:

- Cougar Looper
- Higher Wage
- Fire & Ice

- Rector Quad
- Rocky Top
- Sterling Silver

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:

- <u>Timber Sale Contracts:</u> Approximately 120 miles of active road maintenance (associated with FY 2017 hauling operations and road use) is planned within timber sale contracts.
- Approximately 90 miles of mechanical road brushing and spraying is planned for State Forest roads in this operations plan.

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

Specific Forest Road Costs associated with each timber sale can be found in Appendix A: Forest Roads Summary

Land Surveying

Land surveying may be necessary for the following timber sales:

- Cougar Looper
- Higher Wage

Sterling Silver

Approximately 1.5 miles of ownership boundary are planned to be surveyed and 6 property corners are planned to be re-witnessed at an estimated cost of \$17,000.

Young Stand Management

The young stand management program applies various silvicultural treatments to create diverse management options for forest development.

These applications include site preparation, planting, interplanting, underplanting, rehabilitation, vegetation management, slash abatement, invasive species control, tree protection, pre-commercial 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 and emulates a natural species mix for the region. 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 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 the forest health issues of Northwest Oregon such as Swiss Needle Cast.

The use of South Fork crews is an important component to the success of young stand management activities on the Clatsop State Forest. Activities such as tree protection (trapping, bud capping and tubing), noxious weed control, mechanical hand release, and seed collection will mainly be accomplished by South Fork inmate crews.

See the Young Stand Management Table in the Appendix A for an itemized list of what is planned in FY2017.

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

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 three 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 2017, there are 1,400 acres proposed for site preparation through a combination of aerial and hand applications using contractors and South Fork crews.
- (2) Dense slash concentrations created during timber harvest will be mechanically piled concurrently with harvest operations during the summer and fall seasons to improve and open planting areas. Approximately 650 acres are proposed for mechanical site preparation.
- (3) Slash accumulations from harvest activities (landings and processor piles) and any mechanically piled slash concentrations are burned by State Forest staff during the late fall and winter after sufficient rains have reduced the risk of an escaped broadcast burn.

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, required stocking guidelines, natural advanced regeneration, and the desired future condition of the stand. To accomplish this, a mixture of species are 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 1,400 acres of initial planting and 200 acres of interplanting in regeneration harvest units to be planted by contractor crews. A mixture of the following species will be planted based upon the site characteristics: western hemlock, Douglas-fir, noble fir, Sitka spruce and western redcedar. 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 700 acres of chemical release through aerial and hand chemical application using contractor and South Fork crews, and 500 acres of mechanical hand release using contractor and South Fork crews.

Roadside vegetation management is intended to maintain visibility for public and employee safety when driving the forest road network and to protect the economic investment made to our road system. This AOP will complete approximately 300 miles of roadside herbicide treatment using a contractor.

Tree Protection

This activity is designed to protect young stands from being foraged by elk and deer, or damaged by clipping or girdling by mountain beaver, voles, rabbits, mice and other rodents. 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 1,400 acres and install and maintain tree protection barriers (bud capping and tubes) on 600 acres using contractor and South Fork crews. We are also engaged in conversation and planning with ODFW to get authorization for limited damage control hunting in areas that have been heavily impacted by big game damage.

Precommercial Thinning

During this AOP, 600 acres of stands may be scheduled for Precommercial thinning based on funding availability. Budgets are currently being prepared but it will not be known if funding is available until later in the spring.

Precommercial thinning (PCT) is a silvicultural technique that provides growing space by removing less vigorous trees from the stand during this stage of competition. These thinnings are made as an investment for the future growth and development of the stand. PCT is conducted in stands when high stand densities first develop, generally from 7 to 18 years of age. This practice accelerates the development of both conifer and hardwood stands towards the selected silvicultural pathway. Generally, all minor species, such as western redcedar and true firs, are retained. The practice of precommercial thinning allows for increased individual tree growth until significant competition between trees develops again, 10 to 15 years later. At this point, other management prescriptions can be evaluated.

Red alder and western hemlock stands provide unique challenges for density management, as these specie generates a prolific amount of seed that will germinate in the understory of existing stands. Precommercial thinning of red alder and western hemlock stands regenerated from natural seeding, advanced regeneration or plantations is required at a relatively early age (7 to 8 years). Precommercial thinning of these extremely dense young stands provides flexibility in future density management activities.

Invasive/Noxious Weed Management

Approximately 200 acres of invasive/noxious weed treatment is expected to be accomplished by District staff and/or South Fork Crews. Planned invasive weed treatment will focus on continuing work in the Astoria Basin and addressing small populations of Scotch Broom identified along roadside ditches, landings, and in units, as resources allow.

Pruning

There are currently no areas planned or identified for pruning for FY2017.

Stocking Surveys

Stocking surveys will be conducted on young conifer stands to determine stocking levels in the one year old and three year old stands. Approximately 3,500 acres of stocking surveys will be conducted by district staff in FY2017.

Recreation Management

Overview of Recreation Management

Recreation activities are diverse on the Clatsop State Forest, with dispersed use throughout the forest. Activities include family camping, group camping, hunting, target shooting, fishing, hiking, all-terrain vehicle (ATV) riding, horseback riding, mountain biking, nature study, and sightseeing. 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.

Utilizing the South Fork Inmate Camp for maintenance and repairs of recreation facilities is a critical component of achieving the FY2017 objectives of the District recreation program.

District staff received a proposal from the North Coast Chapter of Oregon Equestrian Trails. This user group proposed the construction of several equestrian challenge obstacles at the Northrup Creek Horse Camp. This opportunity was approved by the State Forests Division. The organization that proposed the development has entered into ODF Adopt-a-Trail agreements for conducting the construction and maintenance. Construction of equestrian challenge obstacles has not begun but is expected to during this AOP.

Planning

Planning for development of designated ATV trails for the Nicolai Mountain OHV Riding Area will be limited through this annual operations plan. Some degree of modification of the original riding area is anticipated based on acquired new information as trail objectives are accomplished. The overall goal during this planning period is to identify and assess what OHV use is ongoing. The information gathered will be used to inform and support future management decisions.

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

Facilities

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

- Gnat Creek Campground
- Henry Rierson Spruce Run Campground
- Beaver Eddy Campground
- Northrup Creek Horse Camp
- Viewpoint Camp
- Lost Lake dispersed recreation area (proposed day use area)
- Lower Nehalem dispersed sites (two)
- North Fork Nehalem dispersed sites (two)
- Kerry Road dispersed sites (two)
- Plympton Ridge dispersed sites (two)
- Shingle Mill OHV Staging Area and Trailhead
- Hunt Creek OHV Trailhead
- Astoria District Demonstration Forest
- Chet Reed Arboretum
- Gnat Creek Trailhead
- Bloom Lake Trailhead
- Soapstone Lake Trailhead
- Diane Berry 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

During this AOP work will continue on the repair and retrofitting of our campground kiosk structures to repair rot issues.

Motorized Recreation Operations/Maintenance

Within the Nicolai Mountain Off Highway Riding Area there are approximately 25 miles of Off Highway Vehicle (OHV) trails, with an 820 foot learner's loop at the Shingle Mill Staging Area. ODF continues to receive funding from Oregon Parks and Recreation Department (OPRD) for funding District OHV positions and facility operation and maintenance costs. ODF continues to work collaboratively with the District Recreation Advisory Committee and local ATV users to develop the Nicolai Mountain OHV Riding Area.

For FY2017 the Astoria District will complete the following OHV projects:

- Continued maintenance of existing designated trails.
- Construct re-routes to direct riders off forest roads.
- Identify and construct minor trail re-routes.
- Continue inventory and GPS mapping of dispersed ATV trails.
- Vacate ATV trails that cause resource damage or direct riders onto private ownership as appropriate.
- Continue to work with existing ATV user groups and develop new working relationships as available.
- Continue collaborative work with 4x4 user groups to develop opportunities for 4x4 use.

Non-Motorized Recreation Operations/Maintenance

Trail re-routes and associated maintenance has been steadily increasing on the District. Planned re-routes of non-motorized trails during this AOP include sections of the Northrup Creek Equestrian Trail and Spruce Run Creek Trail. Currently, there are approximately 20 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 Three miles

Resource Specialists or Contract Service Providers:

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

- Public/user group clubs and organizations.
- Clatsop Recreation Advisory Committee.
- South Fork Inmate Camp provides grounds/facilities construction and maintenance support.
- ODFW: Consulted on wildlife and fisheries issues.
- Forest Management, Forest Roads, Reforestation and Administration Staff for integration with other planned management activities and staff support.
- Support from Oregon Parks and Recreation Department for continued ATV program development.

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 and on-line maps, improving trail signage, identifying and GPS locating dispersed recreation sites across the forest.

Volunteer Efforts

In 2015, the Clatsop State Forest had over 1,023 hours of volunteer work consisting of trail volunteers (Pacific Trail Riders and Oregon Equestrian Trails), 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 ATV program is provided by the Clatsop County Sheriff's Office which has one officer dedicated approximately half time to ATV enforcement. Law enforcement for other district general recreation will be provided by a seasonal law enforcement officer during the heavy recreation use season.

Grants

Opportunities for grant funding may exist for the following:

- Installation of vault toilets at Beaver Eddy Campground and the Henry Rierson Spruce Run Tent Site.
- Purchase of a mini-excavator to support motorized recreation activities.
- OHV trail bridges to construct trail re-routes.

If these opportunities are deemed feasible and the district receives approval through the Recreation Leadership Group, then steps will be taken to move forward on these proposals.

Land Exchange

The District does not anticipate commencing any land exchanges in FY17 due to budget and staffing limitations. Although we have no deliberate plans to begin any land exchanges in FY17, if high priority land exchange opportunities presents themselves, they will be evaluated on a case by case basis.

Other Integrated Forest Management Operations

Public Woodcutting

Purpose: The primary objective of the District Firewood Cutting Program is to provide a source of firewood from State Forests to the public for personal use and secondarily to reduce fuel hazards, improve visibility along roads, and provide a recreational opportunity. The District's Firewood Cutting Program is primarily tied to the completion of timber sales. Timber sale contracts require any non-merchantable wood or cull material that has been yarded to the landing and is suitable for firewood to be placed in a pile.

State Forests are managed for multiple benefits, and snags, downed wood and stumps are important habitat components under our Forest Management Plan. Permittees should follow the permit instructions, review the permit and district maps, and consult with ODF personnel to ensure they remain on State Forests land. Property lines are frequently unmarked and ODF firewood permits are only valid on State Forests land. Harvesting firewood without the landowner's permission is trespass.

Firewood is a high-risk vector for wood-boring insects, such as emerald ash borer and Asian longhorned beetle, two species responsible for widespread defoliation of forests in Midwest and Eastern states. The Oregon Invasive Weed Council and ODF encourage people to obtain their firewood in a place as close as possible to the place where it will be burned. Recreationists have a role in protecting the forests by not moving firewood great distances.

Permit Fee: The permit fee is \$20 for two cords of firewood and is not transferrable to another party.

When: Wood permits will be issued for three week periods and they are available Monday-Friday during business hours, outside of fire season. Fire season is generally from July 1st through October 15th.

Who: An unlimited number of personal firewood cutting permits will be issued to the public, with a limit of 5 permits per individual or household within a calendar year. The permit cannot be used to sell firewood to another party, or to manufacture wood products for resale. Firewood cutting permits will be sold and administered to public employees under the same processes used by the public. Oregon Department of Forestry does not guarantee the quality or availability of wood when issuing firewood cutting permits, as such, permit fees will not be refunded. Exceptions to the two cord limit may be made for non-profit organizations, with prior district authorization.

Where: Designated firewood cutting areas will be by Forest Management Basins and will be marked on the permit map, which excludes active and sold timber sales, recreation sites, planned operations, and any ecologically sensitive areas. There is no guarantee that units or travel routes will be posted in the field.

How: Revenue from permit fees will be used to reimburse administration of the firewood cutting program. Enforcement of firewood cutting permits will be accomplished by contracted law enforcement officers and following the Firewood Cutting Guidance described in 12.2.G1.2.2. Additional firewood cutting permit requirements and guidelines are provided with the permit.

During the FY2017, it is estimated that the Astoria District will issue approximately 700-1,000 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 for the products to be re-sold. There is a fee charged to individuals for a Commercial Use Permit, which is based on the type of forest product and quantity. Revenues during FY2015 yielded approximately \$13,000 from the sale of 66 permits. It is anticipated that FY2016 and FY2017 will yield approximately the same results. Special Forest Products include: mushrooms, salal, moss, and ferns. 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

The District, through a Salem inventory contract, is anticipating to have 50 stands inventoried in an effort to make progress in updating our inventory with current information. Many of the stands inventoried in the early 2000's have been operated in and need to be re-inventoried to obtain post-harvest condition. It is likely that district staff will also be conducting inventory as the need arises.

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.

Fish Distribution Surveys: Streams are classified in part as supporting fish (Type F) or not supporting fish (Type N). Riparian protection measures depend in part on the presence of fish. Fish distribution information varies across the district. Many streams have been surveyed with electro fishing techniques that established the upper extent of fish use. However many very small streams have not yet been surveyed for fish presence. These streams will be evaluated with either an electro-fishing method (through contractual arrangements with private consultants or support from ODFW) or with a

Physical Habitat Survey. The physical methodology was developed in conjunction with Oregon Department of Fish and Wildlife. In 2016 the Astoria District plans to conduct 50 miles of surveys to determine fish presence. Surveys will be conducted by ODF staff and/or a contractor if funding is available.

The Astoria District will continue its northern spotted owl (NSO) 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 the State Forest Division Northern Spotted Owl Policy, Procedures, and Guidance (January 2012).

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 1,000 survey stations; each station is called for the NSO 6 times over the survey season yielding 6,000 individual nighttime surveys conducted. Approximately 4 daytime follow-up surveys are expected to follow up any NSO detection during the night calling.

In FY2017, the district will continue its marbled murrelet survey program in order to comply with federal and state Endangered Species Acts and to contribute to Forest Management Plan goals. Survey requirements are determined in accordance with ODF Policy & Guidance. Operations fall into either the Operational Survey Zone or the Systematic Survey Zone. The Operational Survey Zone is closest to the coast where all known occupied sites are located. East of the Operational Survey Zone is the Systematic Survey Zone, where potential murrelet habitat is being surveyed systematically and operational surveys are not being conducted.

Table 3. Summary of Surveys for Threatened and Endangered Species

Operation	Species ¹ (NSO/MM)	Survey Years ²	BA ³ Required	Special Considerations
Boot Scoot	NSO	'14-'16	No	
Boot Scoot	MM	-	No	Systematic Survey Zone
Cougar Looper	NSO	'15-'16	No	
Cougar Looper	MM	'15-'16	No	
Crawfish Corner	NSO	'14-'16	No	Survey Area 3 only
Crawfish Corner	MM	-	No	Systematic Survey Zone
Emerald Isle	NSO	'14-'16	No	
Emerald Isle	MM	-	No	Systematic Survey Zone
Higher Wage	NSO	'15-'16	No	
Higher Wage	MM		No	Systematic Survey Zone
Petersen Heights	NSO	'13-'16	No	Survey Areas 1 & 2 only
Petersen Heights	MM		No	Systematic Survey Zone
Rector Quad	NSO	'14-'16	No	
Rector Quad	MM	'14-'16	Yes	Road Right-of-Way
Rocky Top	NSO	'14-'16	No	
Rocky Top	MM	'14-'15	No	
Saddle Up	NSO	'15-'16	No	
Saddle Up	MM	'15-'16	No	
Sterling Silver	NSO	'15-'16	No	
Sterling Silver	MM	-	No	Systematic Survey Zone
Tall N Small	NSO	'14-'16	No	Survey Areas 5-8 only
Tall N Small	MM		No	Systematic Survey Zone
Tone Deaf	NSO	'14-'16	No	
Tone Deaf	MM	-	No	Systematic Survey Zone

Aquatic and Riparian Resources

Restoration Goals and Identification Process: The overarching principles for fish habitat restoration are described in the Forest Management Plan. Landscape and site-specific strategies will improve levels of aquatic function in the short term to meet the immediate habitat needs of depressed species and place aquatic habitats on a trajectory toward desired conditions. At the same time actions are carried out to restore the ecological processes and functions that create and maintain self-sustaining habitats over the long term. Restoration strategies include: completing assessments to identify limiting factors and identify, design, and implement projects to remedy identified problems. Projects should mimic natural process, use multidisciplinary approach, and consider site-specific as well as watershed scale processes and disturbance regimes. Projects will be designed to re-establish natural physical and biological processes. The district's approach to restoration planning is further refined in the Implementation Plan. The types of projects in order of priority are: (1) Fish Passage, (2) Road Decommission or Hydrologic Disconnection, (3) Instream Habitat Projects, and (4) Alternative Plans to Manage Riparian Areas. More information on these project types and rationale for priorities is provided in the district IP.

Projects can be implemented *opportunistically* (when operating near streams that would benefit from restoration efforts) or with a more complex and typically *larger scale* approach both of which will be evaluated for ecological benefits. For the Astoria District the goals are to:

- Implement 2-5 larger scale projects over a 10-year period if resources and partners are available.
- Implement 2-3 opportunistic projects per year if resources and partners are available.
- Contribute to fish passage improvement and hydrologic disconnection.

There are stream enhancement opportunities identified in association with sales in this sale plan.

• Potential log placement on Emerald Isle, Tall N Small, and Tone Deaf.

A larger scale project is planned in the Quartz Basin and the adjacent McGregor Basin, which is managed by the Forest Grove District, that prescribes wood placement and riparian plantings in Upper Rock Creek. This project is being coordinated by the Upper Nehalem Watershed Council and involves the following landowners: ODF, ODOT, and Weyerhaeuser. ODF will be supplying many of the trees that will be used to create the stream enhancement structures. During 2015, the trees were cut and decked for this project. This project is expected to occur between July and August of 2016 which corresponds with the in-water work period for this stream reach.

Before determining if these potential projects will go into a full planning process, more field review is needed. For stream restoration the ODF Aquatic and Riparian Specialist and the ODFW District Fish Biologist will perform a field evaluation to make sure that the stream will benefit from the proposed project and meets screening criteria (see below). This evaluation will also include reviewing findings, recommendations, modeled conditions, and fish species distribution from available sources such as watershed analyses, ODFW aquatic inventories and fish distribution data, intrinsic potential models, and federal/state recovery and restoration implementation plans where available.

Some screening criteria used to help determine if a potential stream wood placement project should be further considered include:

- Good access to stream (e.g. either cable over stream or road/tractor ground near stream).
- Trees of sufficient size (meet ODFW diameter and length criteria) or with root wad attached are available in the harvest area.
- Operation is adjacent to a salmon or steelhead stream.
- Operation is adjacent to stream with an active channel width between 10 and 20 feet.

¹ Surveys are conducted according to accepted protocols when habitat for the specific species is determined to be present. NSO – northern spotted owl, MM – marbled murrelet.

² Years that surveys have been completed or are planned.

³ A Biologic Assessment is required for this operation due to the presence of NSO or MM in the vicinity of the operation.

- Wider channels may work, but are more challenging because of the length of wood required (2 times channel width). Projects in narrower channels can work as well, but are considered a lower priority-especially if the stream is steep and only contains cutthroat trout.
- Personnel are available to administer implementation of the project.
- Address one or more of the habitat restoration priorities.

Restoration accomplishments are reported to OWEB using the OWRI electronic filing process and reported by ODF annually in our report to the counties, Board of Forestry, and DSL.

Aquatic and Riparian Conditions: Watershed assessments have been completed on 11 basins on this district. In addition the Oregon Department of Fish and Wildlife completed Fish Habitat Assessments and summarized the findings by district (ODFW 2005-2006). Limiting factors have largely been identified in the ODFW conservation strategy, the 2005 State of Oregon Coastal Coho Assessment (OCCA) (State of Oregon 2005), and ODF watershed analyses. Common limiting factors include: a lack of large wood in streams, increased fine sediment in riffles, a lack of complex pool habitat, and a need for more off-channel habitat.

Several strategies, described in the Forest Management Plan dictate protection measures designed to protect, maintain, and restore aquatic and riparian functions. These strategies are employed during harvest activities and include but are not limited to, leaving trees adjacent to streams to protect stream temperature, provide nutrients, protect stream banks, and eventually provide wood to improve fish habitat. Best management practices for road construction, reconstruction, and maintenance minimize impacts to water quality. Aquatic Anchors have been established on five watersheds where additional aquatic conservation measures are applied. The Aquatic Anchors include: Buster Creek, Upper North Fork Nehalem River, Upper Rock Creek, Coal Creek, and Northrup Creek.

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, Society of American Forestry meetings and tours, and many public school presentations. The district has representatives who attend local watershed council meetings, including the Upper Nehalem Watershed, and the Nicolai-Wickiup Watershed. The Assistant District Forester is on the Board of Directors of the North Coast Watershed Association and the District Forester is an elected officer on the Clatsop Forest Economic Development Committee (CFEDC).

Administration

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

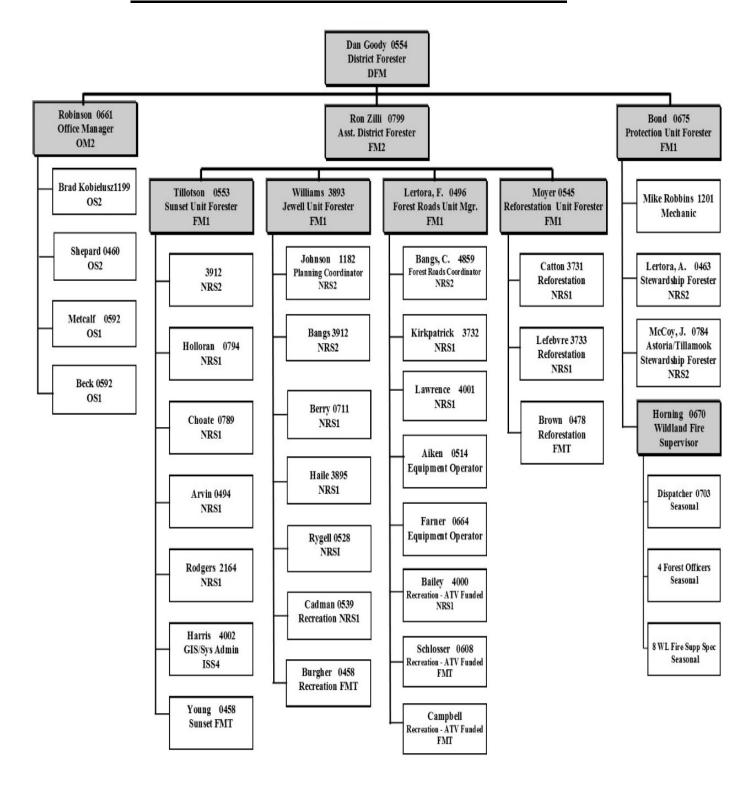
Administration includes the District Forester, Assistant District Forester, Office Manager and clerical staff. The administrative function provides policy and planning direction, budgeting, coordination between units and programs, oversight to the field units, public contact and clerical support. The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

The **Forest Roads Unit** is responsible for the road and project support, establishment and maintenance of property line surveys, and supervision of the district road maintenance crew. The Forest Roads Unit is also responsible for the management of the motorized recreation, which includes: an ATV Specialist and an ATV Technician. The ATV positions are funded through Oregon Parks and Recreation funds.

The **Forest Management Units**, include the Jewell Unit (central Clatsop County) and the Sunset Unit (remaining state forest lands along the western and northern portions of Clatsop County). They are responsible for the planning, preparation and administration of all State Forest timber sales. The Jewell Unit Forester is responsible for the management of the District's non-motorized recreation facilities and trails, which includes the management of one Recreation Specialist and one Recreation Technician. Both recreation positions are funded through State Forest Development Funds.

The **Reforestation Unit** is responsible for young stand management. The reforestation unit consists of a Reforestation Unit Forester, two Reforestation Foresters, and a seasonal Reforestation Technician.

DISTRICT ORGANIZATION CHART



APPENDIXES for the 2017 AOP

Appendixes A through E are related to the AOP and are required for all district AOPs. Appendixes F through H are related to the IPs or FLMCS and should be included only if a modification to the IP or change to FLMCS is being proposed. If some appendixes are not included, then continue the linear progression of the appendixes (i.e. if no IP modifications are proposed, but an FLMCS change is proposed then the FLMCS appendix will be Appendix F.)

A. Summary Tables

- a. Harvest Operations Financial Summary
- b. Harvest Operations Forest Resource Summary
- c. Harvest Operations Stand Structure Summary
- d. Forest Road Management Summary
- e. Reforestation and Young Stand Management Summary
- f. Recreation Management Summary

B. Maps

- a. Harvest Operations Vicinity Map
- b. Include other maps that support the AOP

C. Consultations with Other State Agencies

This appendix summarizes the results of consultations with the Oregon Department of Fish and Wildlife and other agencies, as appropriate. This appendix contains any written comments that we received from state agencies.

D. Public Involvement

This appendix describes the results of the public involvement process of this AOP and will be added prior to its approval.

E. Pre-Operations Reports

Pre-Operations Reports are available from the district upon request.

- F. Landscape Design Modification (major)
- **G.** Harvest Acre Range Modification (minor)

H. Forest Land Management Classification Changes

This appendix describes (major) changes to the State Forests' Forest Land Management Classification maps, including maps of the specific changes.

TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District:	Astoria		Fisca	al Year:	2017					Date:	02/05/2016		
	Fund	%		Sale	Net A	Acres		,	Volume (MBF)		Value	
Primary Operation	BOF	CSL	County	Quarter	Partial Cut	Clear-cut	R/W	Conifer	Hard- woods	Total	Gross	Projects	Net
Boot Scoot	100%	0%	Clatsop	1	0	93	2	2,554	50	2,604	\$798,000	\$61,350	\$736,650
Cougar Looper	100%	0%	Clatsop	2	0	190	2	6,338	500	6,838	\$2,641,374	\$218,750	\$2,422,624
Crawfish Corner	100%	0%	Clatsop	4	119	33	2	2,232	155	2,387	\$716,100	\$184,250	\$531,850
Emerald Isle	100%	0%	Clatsop	2	0	155	7	7,314	550	7,864	\$2,752,400	\$157,720	\$2,594,680
Fire & Ice	100%	0%	Clatsop	4	0	89	1	1,880	875	2,755	\$964,250	\$131,070	\$833,180
Higher Wage	100%	0%	Clatsop	3	0	290	4	14,427	515	14,942	\$5,229,700	\$444,890	\$4,784,810
Petersen Heights	100%	0%	Clatsop	3	291	12	6	2,628		2,628	\$801,000	\$196,630	\$604,370
Rector Quad	100%	0%	Clatsop	1	0	85	7	4,105	200	4,305	\$1,623,575	\$232,027	\$1,391,548
Rocky Top	100%	0%	Tillamook	1	0	85	1	3,640	100	3,740	\$1,309,000	\$39,210	\$1,269,790
Saddle Up	100%	0%	Clatsop	1	0	117	0	3,452		3,452	\$1,208,200	\$42,320	\$1,165,880
Sterling Silver	100%	0%	Clatsop	1	0	142	0	4,748		4,748	\$1,661,800	\$189,966	\$1,471,834
Tall N Small	100%	0%	Clatsop	4	176	196	3	9,410		9,410	\$3,293,500	\$207,670	\$3,085,830
Tone Deaf	100%	0%	Clatsop	2	0	164	2	5,455	1,525	6,980	\$2,443,000	\$43,260	\$2,399,740
	•		•	Total:	586	1,651	37	68,183	4,470	72,653	\$ 25,441,899	\$ 2,149,113	\$ 23,292,786
Alternate Operations													

Alternate Operations													
Boiler Fleet	100%	0%	Clatsop	Alt.	157	188	7	5,748		5,748	\$1,715,050	\$366,150	\$1,348,900
Cal Barr	100%	0%	Clatsop	Alt.	52	90	3	2,451	100	2,551	\$822,055	\$204,073	\$617,982
Davis Ridge Combo	100%	0%	Clatsop	Alt.	38	24	0	898	50	948	\$320,400	\$104,460	\$215,940
Harkin Larkin	100%	0%	Clatsop	Alt.	0	110	0	4,485		4,485	\$2,086,500	\$0	\$2,086,500
Oswego	100%	0%	Clatsop	Alt.	0	139	1	4,000	450	4,450	\$1,557,500	\$139,140	
Pied Piper	100%	0%	Clatsop	Alt.	0	114	2	3,266	975	4,241	\$1,484,350	\$376,930	\$1,107,420
Sliver Picker	100%	0%	Clatsop	Alt.	0	51	0	2,340		2,340	\$957,000	\$29,390	\$927,610
Vesper View	100%	0%	Clatsop	Alt.	118	80	0	3,108		3,108	\$1,025,640	\$340,230	\$685,410
West Sager	70%	30%	Clatsop	Alt.	0	58	0	2,610		2,610	\$913,500	\$30,490	\$883,010
		•		Total:	365	854	13	28,906	1,575	30,481	10,881,995	1,590,863	9,291,132

PRIMARY HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

District: Astoria Fiscal Year 2017 Date: 02/04/2016

This table lists Forest Resources and other issues addressed within Pre-Operations Report due to their presence within or near harvest operations

This table lists Forest Resources a	and o	ther issue	es addres	sed within	n Pre-Ope	erations Rep	ort due to	their pres	sence with	in or n	ear harve	st operati	ons							
Primary Harvest Operations	Unit (Optional)	Forest Health Issues ¹	Invasive Species	LYR/OFS Structures 2	Landscape Design LYR/OFS ³	Install/Replace Culverts on Fish Bearing / Perennial Streams	Harvesting within 100' of Fish Bearing Stream	Domestic Water Source	Potential Stream Habitat Improvement ⁴	Within Aquatic Anchor	Within Terrestrial Anchor	Operating within a NSO Provincial Circle	Within 1/4 mile of MMMA	T&E Fish Adjacent to Harvest Unit / Haul Route ⁵	T&E Plants	Geotechnical Issues Needing Field Review	Recreation Sites	Cultural Resources	Scenic Resources	Other Resources or Issues
Boot Scoot			х											х			х			
Cougar Looper		х	х	х						х			х			х		х		
Crawfish Corner				х					х					х					х	
Emerald Isle				х					х	Х				х						
Fire & Ice			х	х										х		Х	Х			
Higher Wage				х					х	Х						Х			х	
Petersen Heights			х				Х	х						х			Х		х	
Rector Quad		Х	х	х						Х			Х	х		Х		Х		
Rocky Top		Х	Х	х						Х				х		Х				
Saddle Up				х												Х		Х		
Sterling Silver			х	х						Х				х						
Tall & Small			х	х					х					х		х				
Tone Deaf				х					х					х		х				

¹ A 'x' (in any column) indicates yes the resource or other issue occurs within or near the harvest operation and is addressed by the Pre-Operations Report

² A 'x' indicates the harvest operation contains stands that are currently in a Layered or Older Forest Stand Structure

³ A 'x' indicate that the operation contains areas that have been designated for the development of complex forest stands (LYR/OFS)

⁴ The final decision on these projects will occur during sale preparation and inconsultation with ODFW.

⁵ This table lists harvest operations (units or log haul routes) that are adjacent to streams that are known to contain T&E fish. The Pre-Operation Report identifies whether T&E fish are present in the basin.

ALTERNATE HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

This table lists Forest Resources and other issues addressed within Pre-Operations Report due to their presence within or near harvest operations

I his table lists Forest Resources a	anu u	lilei issui	es addres	seu within	ii rie-Op	erations ixep	on due to	men pres	Selice Will	IIII OI II	eai Haive	si operan	UIIS							
Alternate Harvest Operations	Unit (Optional)	Forest Health Issues ¹	Invasive Species	LYR/OFS Structures ²	Landscape Design LYR/OFS ³	Install/Replace Culverts on Fish Bearing / Perennial Streams	Harvesting within 100' of Fish Bearing Stream	Domestic Water Source	Potential Stream Habitat Improvement ⁴	Within Aquatic Anchor	Within Terrestrial Anchor	Operating within a NSO Provincial Circle	Within 1/4 mile of MMMA	T&E Fish Adjacent to Harvest Unit / Haul Route ⁵	T&E Plants	Geotechnical Issues Needing Field Review	Recreation Sites	Cultural Resources	Scenic Resources	Other Resources or Issues
Boiler Fleet			х	х	х		Х	х	Х					х		х			х	х
Cal Barr			х	Х			Х		х				х			х				
Davis Ridge Combo				Х			х							х			х		х	
Harkin Larkin			Х	х															Х	
Oswego				Х					Х					Х					Х	
Pied Piper			Х											Х		х	Х			
Sliver Picker		Х	Х	Х												х				
Vesper View			х					х	х					х		х				
West Sager			х	х					Х					х		Х			х	

¹ A 'x' (in any column) indicates yes the resource or other issue occurs within or near the harvest operation and is addressed by the Pre-Operations Report

² A 'x' indicates the harvest operation contains stands that are currently in a Layered or Older Forest Stand Structure

³ A 'x' indicate that the operation contains areas that have been designated for the development of complex forest stands (LYR/OFS)

⁴ The final decision on these projects will occur during sale preparation and inconsultation with ODFW.

⁵ This table lists harvest operations (units or log haul routes) that are adjacent to streams that are known to contain T&E fish. The Pre-Operation Report identifies whether T&E fish are present in the basin.

TIMBER HARVEST OPERATIONS - FOREST STRUCTURE SUMMARY

District: Astoria Fiscal Year 2017 Date: 02/04/2016

Current Structure				
	Total			
REG				
CSC	284			
UDS	910			
LYR	1,039			
OFS				
Total	2,233			

Post Harvest Structure *							
REG	CSC	UDS	LYR	OFS			
31		253					
742		287					
862			46				
1,635	0	540	46	0			

Desired Future Condition						
GEN	LYR	OFS				
284						
910						
1,039						
2,233	0	0				

^{*} Acres in this table are net in unit acres excluding right-of-way acres.

FOREST ROADS SUMMARY

District:	Astoria	F	iscal Year:	2017		Date:	02/09/2016		
Primary Operations	Construction		Improvement		Od a Davis da	Total Project	Gross Value of	Total Cost as a percent	Comments
	Miles	Cost	Miles	Cost	Other Projects	Costs	Operation	of Gross Value	
Boot Scoot	0.40	\$27,000	1.80	\$15,000	\$19,350	\$61,350	\$798,000	7.7%	
Cougar Looper	0.50	\$27,000	4.40	\$123,200	\$68,550	\$218,750	\$2,641,374	8.3%	
Crawfish Corner	0.60	\$37,800	4.10	\$122,800	\$23,650	\$184,250	\$716,100	25.7%	
Emerald Isle	1.40	\$69,600	2.80	\$55,000	\$33,120	\$157,720	\$2,752,400	5.7%	
Fire & Ice	0.40	\$18,000	5.80	\$87,000	\$26,070	\$131,070	\$964,250	13.6%	
Higher Wage	0.90	\$48,600	3.20	\$75,300	\$320,990	\$444,890	\$5,229,700	8.5%	
Petersen Heights	1.60	\$86,400	4.10	\$79,700	\$30,530	\$196,630	\$801,000	24.5%	
Rector Quad	2.30	\$127,166	0.75	\$23,769	\$81,092	\$232,027	\$1,623,575	14.3%	
Rocky Top	0.40	\$21,600	0.10	\$2,800	\$14,810	\$39,210	\$1,309,000	3.0%	
Saddle Up	0.10	\$5,400	1.20	\$18,000	\$18,920	\$42,320	\$1,208,200	3.5%	
Sterling Silver	0.00	\$0	3.40	\$74,400	\$115,566	\$189,966	\$1,661,800	11.4%	
Tall N Small	0.80	\$43,200	6.30	\$94,500	\$69,970	\$207,670	\$3,293,500	6.3%	
Tone Deaf	0.30	\$16,200	1.20	\$21,900	\$5,160	\$43,260	\$2,443,000	1.8%	
Total	9.70	\$ 527,966	39.15	\$ 793,369	\$ 827,778	\$2,149,113	\$25,441,899	8.4%	
Alternate Operations									
Boiler Fleet	3.00	\$147,000	8.20	\$154,900	\$64,250	\$366,150	\$1,715,050	21.3%	
Cal Barr	1.30	\$70,800	1.70	\$47,600	\$85,673	\$204,073	\$822,055	24.8%	
Davis Ridge Combo	0.00	\$0	1.80	\$50,400	\$54,060	\$104,460	\$320,400	32.6%	
Harkin Larkin	0.00	\$0	0.00	\$0	\$0	\$0	\$2,086,500	0.0%	
Oswego	0.70	\$37,800	2.30	\$34,500	\$66,840	\$139,140	\$1,557,500	8.9%	_
Pied Piper	0.60	\$32,400	4.90	\$130,700	\$213,830	\$376,930	\$1,484,350	25.4%	
Sliver Picker	0.00	\$0	1.30	\$19,500	\$9,890	\$29,390	\$957,000	3.1%	
Vesper View	0.00	\$0	3.90	\$109,200	\$231,030	\$340,230	\$1,025,640	33.2%	
West Sager	0.00	\$0		\$12,000	\$18,490	\$30,490	\$913,500	3.3%	
Total	5.60	\$ 288,000	24.90	\$ 558,800	\$ 744,063	\$1,590,863	\$10,881,995	14.6%	

Appendix A - Summary Tables

REFORESTATION AND YOUNG STAND MANAGEMENT SUMMARY

District: Astoria Fiscal Year: 2017 **Date:** 12/11/2015

ODF Funded Activities		Board of Fore	estrv	Commo	n School Fo	rest Lands	Di	strict
	Acres	Average	, <u>,</u>	Acres	Average		1	
Management Activity	Planned	Cost*/Acre	BOF Cost	Planned	Cost*/Acre	CSL Cost	Total Acres	Total Cost
Initial Planting*	1,400	\$300	\$420,000			\$0	1,400	\$420,000
Interplanting	200	\$180	\$36,000			\$0	200	\$36,000
Underplanting	0		\$0			\$0	0	\$0
Tree Protection-Barriers**	600	\$147	\$88,200			\$0	600	\$88,200
Tree Protection-Direct Control (trapping)**	600	\$75	\$45,000			\$0	600	\$45,000
Site Prep-Chemical- Aerial	1,300	\$60	\$78,000			\$0	1,300	\$78,000
Site Prep-Chemical-Hand(S. Fork)**	100	\$189	\$18,900			\$0	100	\$18,900
Site Prep -Mechanical***	650	\$150	\$97,500			\$0	650	\$97,500
Site Prep-Slash Pile Burning	1,400	\$10	\$14,000			\$0	1,400	\$14,000
Fertilization	0		\$0			\$0	0	\$0
Noxious weeds**	197	\$150	\$29,555	3	\$150	\$445	200	\$30,000
Release-Chemical- Aerial	600	\$65	\$39,000			\$0	600	\$39,000
Release,-Chemical-Hand**	100	\$189	\$18,900			\$0	100	\$18,900
Release-Mechanical-Hand**	500	\$75	\$37,500			\$0	500	\$37,500
Precommercial Thinning****	600	\$85	\$51,000			\$0	600	\$51,000
Pruning	0		\$0			\$0	0	\$0
Roadside Herbicide Spraying (miles)	296	\$192	\$56,599	4	\$192	\$851	300	\$57,450
Other Seed Collection**						\$0	0	\$0
Totals	8,543		\$1,030,154	7		\$1,296.01	8,550	\$1,031,450

^{*}Planting costs include all costs including seedlings

** South Fork inmate crews and contractors will perform these activities.

*** Activity accomplished in conjuction with timber sale harvesting contracts which is later burned by ODF District staff

^{****} Based on funding availability

Appendix A - Summary Tables

RECREATION MANAGEMENT SUMMARY

District: Astoria Fiscal Year: 2017 Date: 02/20/2016 Operations Operations/Maint. Construction Cost Improvement Cost Construction Improvement and (Funding) (Funding) (Funding) **Total Costs** Operation Comments **Projects Projects** Maintenance ODF ODF ODF Other Other Other **Projects Facilities** Campgrounds Henry Rierson Spruce Run \$15,000 \$15,000 \$15,000 Sewer & Sanitary Service/Maintenance Northrup Creek Horse Camp \$5,000 \$5,000 \$5,000 Sewer & Sanitary Service/Maintenance Gnat Creek Campground \$3.000 \$3,000 \$3,000 Sewer & Sanitary Service/Maintenance Beaver Eddy \$3,000 \$3,000 \$3,000 Sewer & Sanitary Service/Maintenance \$0 **Designated Dispersed Campsites** Misc. Improvements \$2,000 \$2,000 \$2,000 \$500 \$500 *Viewpoint Quarry \$500 Sewer & Sanitary Service/Maintenance \$600 *Kerry Road \$600 \$600 Sewer & Sanitary Service/Maintenance *Plympton Ridge Road \$600 \$600 \$600 Sewer & Sanitary Service/Maintenance \$0 Day Use Areas Lost Lake \$1,500 Sewer & Sanitary Service/Maintenance \$1,500 \$1,500 *Shingle Mill OHV Staging Area \$1,000 \$1,000 \$1,000 Sewer & Sanitary Service/Maintenance \$0 \$0 \$0 Trailheads Bloom Lake \$1,000 \$1,000 \$1,000 Maintenance Soapstone \$1,000 \$1,000 \$1,000 Maintenance Interpretive Sites **Demonstration Forest** \$3,000 \$3,000 \$3,000 Interpretive Signs \$0 Trails Non-Motorized \$0 \$0 \$0 Maint. to be conducted by South Fork *Motorized \$15,860 \$15,860 \$15,860 Maint. by Staff and South Fork. Other Operations Law Enforcement \$30,000 \$30,000 \$30,000 Clatsop County Sheriff's Contract Clatsop Recreation Brochures \$3,000 \$3,000 \$3,000 Update/Printing of CSF Rec. Brochures \$2,000 \$2,000 \$2,000 Annual & Misc. Forest Cleanup **Dumpsites Cleanup** \$5,000 Special Projects \$5,000 \$5,000 Kiosk Repairs & Maintenance

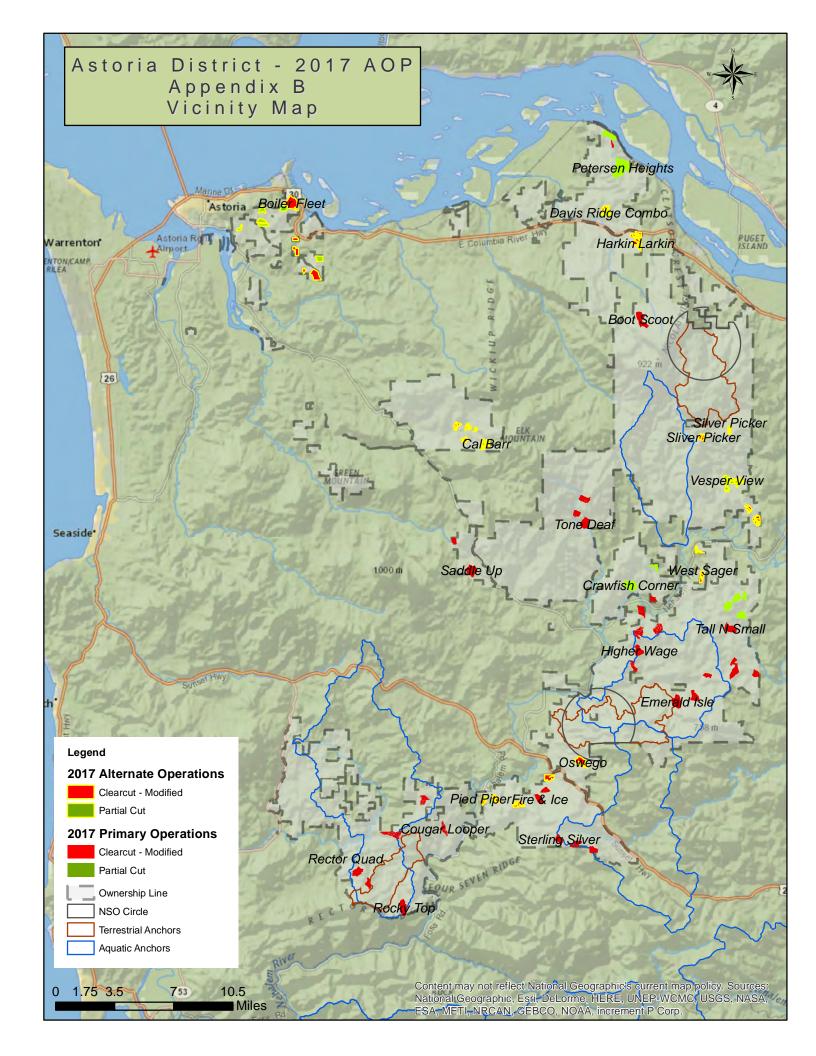
Misc. Maintenance Supplies & Repairs

\$3,000 Misc. Supplies/CG Envelopes/Etc.

\$3,000

\$3,000

^{*}Motorized recreation costs are funded through OPRD transfer funds.



Appendix C - Consultations with Other State Agencies

The Annual Operations Plan is prepared in a preliminary form by District Staff two years in advance of it becoming finalized. During this time the District reviews the plan with Department Staff Specialists as well as Staff from The Oregon Department of Fish and Wildlife (ODFW) and the Oregon Department of Transportation (ODOT).

This Appendix summarizes results of consultations with the ODFW, and ODOT.

Oregon Department of Fish and Wildlife – District Wildlife Biologist Review – Herman Biederbeck:

General comments that relate to most sales

Green Trees

Optimal green tree (GT) placement for wildlife is scattered or clumped distribution in the upland portions of the harvest units; this is especially true for GTs left in lieu of created down wood or snags. Some of the pre-op reports specify that GTs are to be left adjacent to RMAs and/or within GTRAs. RMA prescriptions for GTs should stand alone in their adequacy, and not need additional GTs for augmentation. Green trees in GTRAs offer minimal value to wildlife unless protecting sensitive wildlife sites (e.g. nests) from wind-throw or edge effects.

Snags

Strategies for addressing snag standards in the FMP are generally not mentioned in the AOP. If larger diameter trees are in the stand that is deficient in hard snags, ODFW recommends creating snags (topping is best method) rather than leaving extra GTs. If GTs are left in lieu of snag creation, they should be scattered or clumped in the harvest unit.

Down Wood

Strategies for meeting down wood standards in the FMP are generally not mentioned in the AOP. How will standards be met? If GTs are left in lieu of down wood creation, they should be scattered or clumped in the harvest unit.

Roads

Most of the dirt spurs in this AOP are slated for physical closure after use. Consider closing all of them as vehicle traffic on dirt roads can be a significant source of stream sedimentation. ODFW recommends physical closure for rocked spurs, especially if they have no immediate need in further management and/or maintenance (e.g. culverts). If new spur roads have immediate further needs, consider closing them physically in later AOPs to keep open road densities down.

Astoria staff will take these comments into consideration when performing the detailed sale layout work in the AOP.

Oregon Department of Transportation - Archeological Review:

Archaeologists from the Oregon Department of Transportation (ODOT) have reviewed the proposed timber harvests, road construction and recreation projects to review potential impacts to cultural resources. No known historical or archaeological sites were found during this review. However, ODOT's review of historic maps and other information indicates there was human activity near some of our planned operation that could have led to the presence of cultural artifacts today.

It has been recommended that the following operations should be further reviewed on the ground during field reconnaissance to determine if any trail and/or cabin remains still exist: Cougar Looper, Ebb Tide, Oswego, Rector Quad, and Saddle Up.

Appendix D - Public Involvement and Summary of Changes

The Oregon Department of Forestry held a formal 45 day public comment period for the 2017 Annual Operations Plans from April 4 through May 20, 2016.

The purpose of the Public Comment Period was to provide an opportunity for the public to review the AOPs, ask questions, make recommendations and offer comments. As a public agency, ODF strives to operate in the best interest of Oregonians. We provide opportunities for public participation to assist us in securing the greatest permanent value from state forests for all Oregonians.

This year the district did receive public comments from the North Coast State Forest Coalition and Tom Scoggins. These comments resulted in the following changes:

In conjunction with North Coast State Forest Coalition comments and continued field review, it has been decided that Area 1 of Rector Quad will be deferred until additional Stand Level Inventory work can be completed on the stand types that comprise this harvest unit. This unit will not be included as part of the Rector Quad sale in this AOP. As a result, the Alternate Sale, Fire and Ice will be brought forward to make up the volume difference from deferring Area 1 of Rector Quad.

Tom Scoggins comment's highlighted the Harkin Larkin sale and an error regarding the reported SLI Data; updated information has been added. Current data corrected the reported stand data in Area 1 and Area 2 from CSC to LYR. This stand had a DFC of OFS. In the currently proposed IP modification this stand will be moved to a DFC of GEN. This area was targeted for this DFC change in lieu of other areas due to less critical environmental resources associated with these stands. Specifically, harvest of these stands does not impact fish streams, occupied T&E sites; and are not located within a Terrestrial Anchor Site or Aquatic Anchor. Additionally these stands are next to a major highway corridor and a BPA powerline corridor.

<u>Summary Document</u> – The Summary Document has been updated to reflect the changes that the timber sale listed above created (e.g. - Updated total acres, and volumes, etc.)

<u>Appendix A</u> – The Financial summary, Forest Resource Summary, Stand Structure Summary, and the Forest Road Management Summary have been updated to reflect the changes to the operations listed above.

<u>Appendix B</u> – The vicinity map has been updated to reflect the changes within the Primary and Alternate Operations list.

<u>Appendix F</u> – The Landscape Design changes have been approved by State Forester Decker. The signed approval letter is included in this appendix.

<u>Appendix H</u> – The Forest Land Management Classification changes have been approved by State Forester Decker. The signed approval letter is included in this appendix.

Appendix D - Public Involvement and Summary of Changes

<u>Pre-Operations Reports</u> – The pre-operations report for Rector Quad has been updated to reflect these changes.

With concern of clearcuts in Aquatic Anchors, ODF has utilized increased buffer widths (I.e. 25 feet to 50 feet) for additional protection in all Aquatic Anchors. All harvest operations within Aquatic Anchors are in alignment with species of concern policy and guidance.

Every year, all Timber Sales are reviewed by ODFW Biologist and provide us with general comments for us to consider. Some of the comments made include scattering green trees throughout the units, creating and leaving snags, leaving down wood, and closing dirt spurs to mitigate stream sedimentation. ODF implements all of these recommendations to varying degrees within units of our operations plan on an annual basis.

Public comments and the Program's responses are available upon request.

Appendix E - Pre-Operation Reports

Pre-Operation Reports are available from the district upon request

Appendix F - Changes to Landscape Design - Major Modification to the Astoria District Implementation Plan

The Landscape Design for the Astoria District consists of 30 percent of the land base which is designated to achieve a Desired Future Condition (DFC) of either Layered (LYR) or Older Forest Structure (OFS). The 30 percent landscape design was adopted in July of 2011 as part of the revised Astoria District Implementation Plan (IP). The IP describes the purpose of the landscape design is to achieve landscape objectives set forth in the Northwest Forest Management Plan (FMP).

In order to adapt to new information such as: updated forest inventory, new threatened and endangered species sites, forest land management classification updates, landscape changes due to storm damage, insect and/or disease or other significant events; the landscape design was anticipated to change over time. Changes of up to 240 acres annually are considered minor changes and can be approved by the District Forester concurrent with the Annual Operation Planning (AOP) process. Changes that are greater than 240 acres are considered major and require a public comment period and are approved by the State Forester.

The proposed changes are driven by four factors: 1) new threatened and endangered species sites; 2) updated inventory information of stands that have recently grown into OFS or are approaching OFS; 3) forest land management classification updates (See Appendix A of the FY17 AOP); and 4) GIS "housekeeping" to removing gaps and snapping the DFC layer to our ownership layer.

The currently proposed changes consist of adding 1,645 acres and removing 1,725 acres. The resulting total district acreage within the mapped DFC landscape design is 41,118 acres (30.05%). A summary of the current forest condition of the proposed changes is shown in Figure 1. A summary of the current stand age of the proposed changes is shown in Figure 2. The spatial location of the changes is shown in Figure 3.

Summary of the basis for stands added to the mapped DFC landscape design:

- Threatened and Endangered Species Sites: The Astoria District has been revising existing MMMA boundaries to meet new policy standards. In 2011 all the district MMMA's were placed into the landscape design. As the district has been revising boundaries to the MMMA's, many of the newly designated MMMA's were not within the district DFC. Approximately 722 acres of MMMA not within the district DFC and has now been added.
- Threatened and Endangered Species Sites: Stands with recent NSO activity
- Update Inventory Stands currently OFS or nearly at that condition after field review
- GIS housekeeping snapping boundaries to ownership, removing gaps, etc.

Summary of the basis for stands removed from the mapped DFC landscape design:

- Stands not adjacent or within a Threatened and Endangered Species Site
- Stands not currently OFS
- Stands not expected to reach the DFC goal due to silvicultural limitations.
- Stands meeting the criteria above that also have high revenue generating potential.
- GIS housekeeping snapping boundaries to ownership, removing overlaps, etc.

This proposed major modifications to the IP requires a 30 day public comment period which will be held in conjunction with the Districts 2017 AOP public comment period. At the close of the public comment period, the Department will consider the public comments and make final decisions on the proposed changes.

Figure 1.

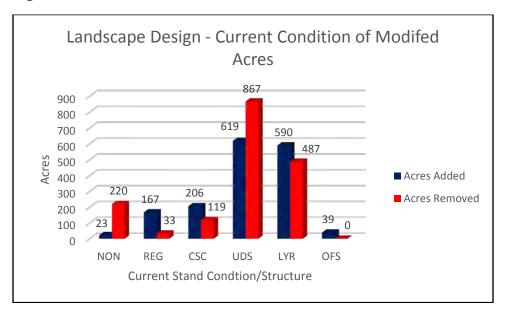


Figure 2.

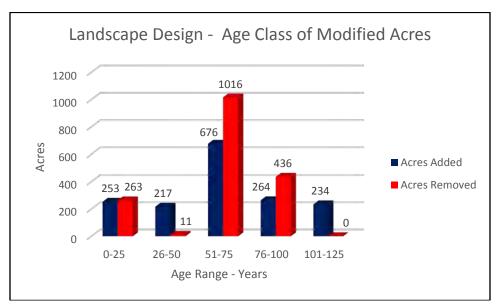
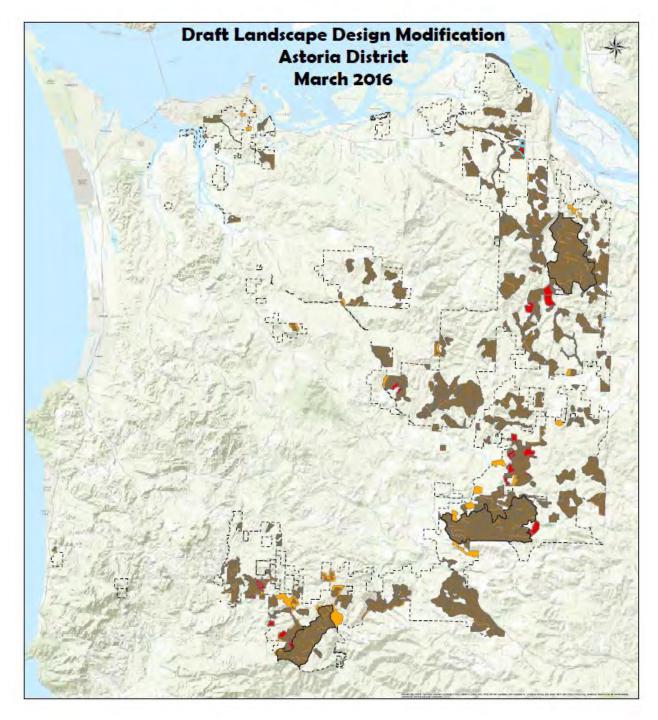


Figure 3.







Appendix G – Minor Modification to the Astoria District Implementation Plan

The Astoria District Implementation Plan under the Northwest Oregon State Forests Management Plan was approved in July 2011. The approved plan provides for minor modifications as approved by the District Forester. Minor modifications are any modification to the approved document that does not meet the definition of major modification. A major modification is defined as "revisions that propose changes to the annual harvest level ranges of more than 25% (based on combined acreage of regeneration and partial harvest)."

Astoria District Minor I.P. Modification:

During this time of anticipated transition into a revised NW Oregon Forest Management Plan, the District is preparing a FY17 AOP that will focus on first entry thinnings in young stands and modified clearcuts in higher valued stands.

Additionally, since 2001, the district has undergone a fairly rigorous thinning regime aimed at gaining revenue, while increasing stand complexity and structure. Over this time the silvicultural need to continue thinning at this rate has decreased. As a result, the district has prepared a minor modification to the acres ranges Table 13, Annual Harvest Objective, Volume and Acres in the District IP.

The District is increasing the top range of regeneration harvest acres to 2,200 and is reducing the low end of the acres range of partial cut harvest to one hundred acres. Additionally, the top end of partial cut acres has been reduced to 2,800. The change in acres totals 11.1%, under the 25% allowed for a minor modification.

Table 13. Annual Harvest Objective, Volume and Acres

Volume (MMBF)	Clearcut (Regeneration Harvest) Acres	Partial Cut Harvest Acres
(2011 I.P.) 73	285 - 1,615	605 - 3,430
Vo.	*	+ +
(2016 Modification) 73	285 - 2,200	100 - 2,800

Approved:

Dan Goody, Astoria District Forester

6/30/2016 Date

Appendix H - Changes to Forest Land Management Classification

The Forest Land Management Classification (FLMC) is a method of describing the management emphasis of parcels of state forest land. The management emphasis identifies the extent to which a parcel of land can be managed for a variety of forest resources. It also identifies when a particular forest resource may need a more focused approach in its management, or possibly an exclusive priority in its management.

The framework of the FLMC places all state forest land within one of four land management classifications. The classifications are: 1 - General Stewardship, 2 – Focused Stewardship, 3 – Special Use, and 4 – High Value Conservation Area. Subclasses are assigned for the specific forest resources that require a Focused Stewardship, Special Use, or High Value Conservation Area Classification.

This Appendix describes changes to the Astoria District FLMC. These changes meet the definition of a major modification. A major modification is defined as one that cumulatively exceeds 500 acres within one year. Major modifications require a 30 day public comment period which will be held in conjunction with the Districts 2017 AOP comment period. At the close of the public comment period, the Department will consider the public comments and make final decisions on the proposed changes. The District Forester will forward the draft final changes along with any public comments to the Northwest Oregon Area Director and the State Forester for review and final approval.

The Astoria District FLMC was last updated in June of 2014. Since that time, the District has been in the process of reclassifying many of their Marbled Murrelet Management Areas (MMMA), as well as continuing to conduct fish presence surveys on streams with unknown fish use. These two processes affect the acres of both Focused Stewardship and High Value Conservation in the Wildlife Habitat and Aquatic & Riparian Subclasses. This FLMC update incorporates the new MMMA acres and stream classification acres – no other changes were made to the FLMC. All acres are listed in the tables below.

Tables 2 and 3, originating in the District Implementation Plan have been updated to reflect these changes. As defined in OAR 629-035-0060, major modifications require State Forester approval. Updated FLMC maps are also included in this Appendix.

Table 2. Astoria District Acres, by Stewardship Class and Fund

Classification	BOF	CSL	Total Acres	
High Value Conservation	24,380	250	24,629	
Focused Stewardship	62,624	1,379	64,003	
Special Use	1,264	64	1,328	
General Stewardship	46,554	312	46,866	

Table 3. (Includes overlapping Acres) Forest Land Management Classifications for Astoria District – Focused and Special Subclasses (Acres)

	Focused	Special Use	High Value Conservation
Administrative Sites	0	76	0
Agriculture, Grazing	0	11	0
Aquatic & Riparian	4 8,589 47,642	0	13,058 13,713
Cultural Resource	8	10	0
Domestic Water Use	81	0	0
Energy & Minerals	0	255	0
Operationally Limited	0	790	0
Plants	0	0	55
Recreation	1,098	140	0
Research/Monitoring	250 249	91	0
Transmission	0	214	0
Visual	9,237 9,236	33	0
Wildlife Habitat	37,088 37,532	0	12,027 12,132



Department of Forestry

State Forester's Office 2600 State Street Salem, OR 97310-1336 503-945-7200 FAX 503-945-7212 www.oregon.gov/ODF

To:

Doug Decker, State Forester

From:

Andy White, Northwest Oregon Area Director

Date:

June 21, 2016

Subject:

Approval of Modifications to Astoria, Forest Grove and Tillamook

District Implementation Plans and Astoria District Forest Land Management

Classifications.



Introduction

This memo conveys approval of modifications to the Implementation Plans (IPs) for the Astoria, Forest Grove and Tillamook Districts and the Astoria District Forest Land Management Classifications (FLMC). Since the approval of the IPs for Astoria and Forest Grove Districts in 2011 and Tillamook District in 2009, and Astoria District's FLMC in 2012, changes have occurred on these districts that necessitate updating the desired future condition landscape design component of the IPs. Additionally, Astoria District made corresponding updates to the FLMC based on these changes.

Implementation Plan Changes

The landscape design for the Astoria and Forest Grove Districts consists of 30 percent of the land base which is designated to achieve a Desired Future Condition (DFC) of either Layered or Older Forest Structure. On the Tillamook District the designation is 40 percent. The purpose of the landscape design is to communicate where on the landscape older forest conditions will be developed to achieve the objectives set forth in the Northwest Forest Management Plan (FMP).

In order to adapt to new information such as: updated forest inventory, new threatened and endangered species sites, forest land management classification updates, landscape changes due to storm damage, insect and/or disease or other significant events; the landscape design was anticipated to change over time. Changes of up to 240 acres annually are considered minor changes and can be approved by the District Forester concurrent with the Annual Operation Planning (AOP) process. Changes that are greater than 240 acres are considered major and require a public comment period and are approved by the State Forester. The current changes are relatively small (less than one percent of each districts acreage) but are greater than the 240 acre administrative threshold qualifying them as a major change.

These revisions in the landscape designs are being proposed for four reasons: 1) discovering areas where DFC complex would provide more resource protection in a different location such as within new northern spotted owl site, along streams containing listed Coho salmon, recreation areas, scenic resources and areas which tie into stands currently designated as complex or provide connectivity between patches of land designated for complex; 2) fitting a stand to a more appropriate or realistic pathway based on additional data obtained from updated inventory and field observations during the AOP planning process; 3) refinement of the DFC boundary on-the-ground for more

efficient operational implementation; and 4) GIS "housekeeping" to remove gaps and align the designations to our ownership layer.

Forest Land Management Classification Changes

The FLMC is a method of describing the management emphasis of parcels of state forest land. The management emphasis identifies the extent to which a parcel of land can be managed for a variety of forest resources. It also identifies when a particular forest resource may need a more focused approach in its management, or possibly an exclusive priority in its management.

The Astoria FLMC was last updated in June of 2014. Since that time, the district has been in the process of reclassifying many of their Marbled Murrelet Management Areas (MMMA), as well as continuing to conduct fish presence surveys on streams with unknown fish use. This FLMC update incorporates the new MMMA acres and stream classification acres – no other changes were made to the FLMC. These changes meet the definition of a major modification. A major modification is defined as one that cumulatively exceeds 500 acres within one year requiring State Forester approval.

Public Comment

Both the major modifications to the IPs and updates to Astoria's FLMC required a public comment period. The public comment period occurred between April 4, and May 20, 2016 concurrent with the Annual Operations Plan public comment period. In response to the public comment period, two comments were received regarding the modifications to the IPs and no comments were received regarding Astoria's changes to the FLMC.

The two comments received regarding the IP modifications (attached) were from the North Coast State Forests Coalition and a citizen of Clatsop County, Tom Scoggins, who had one specific comment on Astoria's proposed changes. The Astoria District responded to the comment from Tom Scoggins. Ron Zilli responded to the comment from the North Cost State Forests Coalition via a phone conversation with Chris Smith on June 9, 2016 and answered his questions regarding the basis for the landscape design changes.

After reviewing the described changes in Appendixes F and G of the respective districts Annual Operation Plans, corresponding maps/data, the public input, the recommendations from the District Foresters and Area Directors, and consistent with OARs 629-035-0030, 629-035-0060(3) and 629-035-0105(1)(a); I am approving the Implementation Plan modifications for Astoria, Forest Grove and Tillamook, and the Forest Land Management Classification changes for Astoria.

Approved by:

Doug Decker, Oregon State Forester

Data

Date

Attachments:

- (1) Appendixes F and H Astoria FY2017 Annual Operations Plan
- (2) Appendix F Forest Grove FY2017 Annual Operations Plans
- (3) Appendixes F Tillamook FY2017 Annual Operations Plan
- (4) Public comment from North Coast State Forest Coalition
- (5) Public Comment from Tom Scoggins