

Memo

To: Andy White, Northwest Oregon Area Director

From: Mike Cafferata, Forest Grove District Forester

CC: Liz Dent, State Forest Division Chief
Brian Pew, State Forest Deputy Division Chief
Ron Zilli, State Forests Field and Policy Manager

Date: June 3, 2019

Re: Information Item – Approved Annual Operations Plan for FY 2020

The FY 2020 State Forests Annual Operations Plan (AOP) for the Forest Grove District is attached for your information. 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 Forest Grove District Implementation Plan (IP) and the FY 2020 Annual Operation Planning Standards and Guidance. Consistent with the FY 2020 AOP guidance, the District has included a number of alternate sales, which were subjected to the same process of review and public comment as the regular sales.

Also included in the AOP is a minor modification to the District IP. Appendix G summarizes the changes made to the District Landscape Design. Changes of up to 240 acres annually are considered minor changes and can be approved the District Forester concurrently with the AOP. These proposed changes will be approved by the signing of this letter.

During its preparation, this plan along with minor revisions to the Landscape Design in the District IP, were reviewed by technical specialists and biologists from within the department and biologists from the Oregon Department of Fish and Wildlife. The draft AOP also underwent a 45-day public comment period. The District received 4 comments in support of gate installation especially in the Lousignont Creek area; 42 comments in support of the downhill Excalibur trail; 1 comment that would prefer a multi-use trail; 1 comment requesting a ban on all target shooting in the forest; 22 comments against the promotion of gravel bike riding; and 11 general comments where no specific information was received.

The management activities planned for this AOP are consistent with the FY 2020 budget level. 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.


This AOP will produce a harvest volume of 61.5 MMBF. There are 14 primary operations and 8 alternate operations proposed within this plan. The net revenue estimate for the FY 2020 AOP is approximately \$30,015,155 (\$12,320,504 in Tillamook County; \$9,484,776 in Washington County; \$3,357,925 in Columbia County and \$4,851,950 in Clatsop County). The planned net revenue exceeds the district's revenue target from the FY 2020 Annual Operation Planning Standards and Guidance of \$29,018,550.

This annual operation plan covers proposed forest management activities for fiscal year 2020. 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. Modifications to these operations will conform to the process included in the draft Annual Operations Planning Directive. The alternate sales in this Annual Operations Plan may be used to replace regular sales that cannot be completed as planned. Actual revenue realized from this AOP could change due to market fluctuations.

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 will also be available on the ODF web site at: <http://www.oregon.gov/ODF/Pages/Reports.aspx>.

Approved:



Mike Cafferata
Forest Grove District Forester



Date

**FOREST GROVE
DISTRICT
2020 ANNUAL
OPERATIONS PLAN**



FOREST GROVE DISTRICT

FY 2020 ANNUAL OPERATIONS PLAN

OVERVIEW

This plan describes the activities and outcomes that Oregonians can expect to see on the eastern side of the Tillamook State Forest for FY 2020. The Tillamook 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.

Forest habitat is expected to develop so 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, 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. 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. Current financial constraints are limiting many activities and you will see this theme throughout the year's plan. We are striving to continue to provide the current opportunities, and are considering a few opportunities for change.

Every year in the Tillamook 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 and has undergone a 45-day public comment period.

This AOP has been reviewed by 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.

A short summary of activities planned for the coming year:

- Planting 625,000 trees on 1,490 acres and conducting vegetation and animal management activities on an additional 3,915 acres to ensure the survival and growth of these plantations.
- Conducting density surveys for northern spotted owls covering the majority of the district and surveying 6 miles of streams for the presence of fish habitat.
- Protecting streams and water resources through a series of buffers and seasonal restrictions.
- Stream improvement projects. An initial screen by ODF's Aquatic and Riparian Specialist suggests that there are streams near planned harvest units that could benefit from large wood additions to the stream system. Further field reconnaissance will be completed by ODF Aquatic and Riparian Specialist and District Staff to determine possible candidates.
- Habitat development projects such as creating snags by removing the tops (550 planned this year), retaining green trees in clearcut areas, and leaving down wood, all for wildlife benefits in harvest areas and future forests.
- Maintaining 802 miles of road and improving approximately 37.3 miles of road to ensure ditch water is dispersed and filtered as much as possible, keeping runoff from entering streams. These roads provide access to timber harvest as well as various recreational opportunities.
- Reviewing District roads to develop plans to block or vacate roads to help manage trash dumping and target shooting.
- Proposed Forest Protection Gates. The installation of 4 gates for Fire Prevention and 5 gates for Public Health and Safety have been proposed at key locations across the District. See *Road Access Management* page 21 for more information.
- Beginning the planning cycle to harvest approximately 60.7 million board feet of timber volume, through modified clearcut, generating revenue of an estimated \$29.9 Million net value. 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.
- Operating and maintaining the following developed facilities in a safe, clean, and responsible manner:
 - 5 campgrounds
 - 2 day use picnic areas
 - 2 highway wayside interpretive sites
 - 12 trailhead facilities

- Providing 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 117 miles of motorized and 65 miles of non-motorized trails, striving to protect the trail investments, provide for user safety, address developing trail issues, and protect water quality.
- Addition of a new downhill mountain bike trail in the Drift Creek Area. More information available in Table 8 on page 29.
- Proposal to add bike rack and gravel bike riding information at Reehers Camp Day Use Area. More information available in Table 6 on page 28.
- Supporting the important volunteer network that assists in forest management including the following programs:
 - Camp Hosts, Adopt a Trail and Trail Patrol
 - Forest Clean-up
 - Trail Maintenance and Construction Work Parties
 - OHV Trail Equipment Volunteer Operator
- Facilitating the pre-planned 8 to 10 organized motorized trail use events and writing and administering 2 to 4 special use permits for non-motorized trail use events. Evaluate new event proposals for fit with forest goals
- Supporting the planning effort on the Salmonberry Rail and Trail project, the opportunity to convert the damaged Tillamook to Banks railroad line into a rail line for portions and a recreational trail throughout its length.
- Providing a firewood cutting program and miscellaneous forest products permits (salal, mushrooms, etc.) as done in 2019.
- Supporting ongoing research on the district, in partnership with research cooperatives and universities.

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INTRODUCTION

This annual operation plan (AOP) outlines state-owned forestland managed by the Forest Grove District for Fiscal Year 2020 (FY20), which begins July 1, 2019 and ends June 30, 2020. This document describes how the activities and projects undertaken by the district will achieve the goals, strategies, and objectives of the *NW Oregon Forest Management Plan (FMP)*, *Tillamook State Forest Recreation Action Plan*, and the *Forest Grove District 2011 Implementation Plan (IP)*. Please refer to the district IP for more specific information on physical characteristics and other district resource information.

The AOP document is divided into five major categories: Integrated Forest Management; Planning and Information Systems; Public Information and Education; Administration and Appendices. A short summary of proposed activities is listed within this introduction. In addition to describing forest management activities for FY 2020, Appendix G describes a minor modification to the district Landscape Design. These changes were reviewed by the District Forester and approved.

The proposed harvest operations and activities are planned to be designed, engineered, and submitted for processing during the FY20 time period. Actual on-the-ground operations will likely not occur during FY20 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 FY2020.

A 45-day public comment period was held from March 18, 2019 through May 3, 2019. The District Forester reviewed all the comments received before approving the plan.

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* and the *Common School Forest Lands Annual Report*. These reports are available through the local district office or online.**

*Minor/major modifications and the procedures for making these changes are described in Forest Grove IP.

**The State Forests' individual district annual reports are available on the Oregon Dept. of Forestry website under "Reports." You can access here: <http://www.oregon.gov/ODF/Pages/Reports.aspx>

INTEGRATED FOREST MANAGEMENT OPERATIONS

Timber Harvest Operations

Overview of Timber Harvest Operations

The FY20 AOP is estimated to produce 61.5 million board feet in volume, generate gross revenues of approximately \$32,612,655 and net revenues of \$29,934,155. The net revenue exceeds the revenue target set for the district. The volume objective is slightly above the 61 MMBF goal outlined in the Forest Grove District’s 2011 Implementation Plan (IP). The goal is to achieve the average of the Annual Harvest Objective (AHO) over the expected duration for the IP. Under normal circumstances, the volume proposed in an AOP will be near the AHO target. However, some events may result in an AOP volume that is farther from the AHO target. These events may consist of, but are not limited to, storm damage, insect and/or disease outbreaks, timber market conditions or other significant events. Alternate timber sales included in the AOP may be sold as primary operations in response to any of these circumstances. Refer to the attached Financial Summary Table (Appendix A, Table A-1) and vicinity map (Appendix B) for more detail.

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 engineer, road engineer, and operations coordinator, as well as fish and wildlife biologists from the Oregon Department of Fish and Wildlife and archeologists from Oregon Department of Transportation. Occasionally, operations may contain a resource or activity where review with another state agency, such as the Department of Agriculture or the Department of State Lands, is warranted. Written comments from the external resource specialists and the resolution of those comments can be found in Appendix C.

Table 1. Annual Operations Plan objectives compared to annual objectives identified in the Forest Grove District 2011 Implementation Plan. All values are acres.

Silvicultural Activity	IP Annual Objective		2020 AOP Objective
	Low	High	
Partial Cut Harvest	0	2,100	297
Regeneration Harvest	500	2,000	1,443

Table 1 shows the proposed acres by harvest type. The 1,443 acres of regeneration harvest planned for FY20 represents one percent of the district. All of the regeneration harvest acres will be designed as modified clearcuts. There is one first entry moderate partial cut in young stands to help improve the growing conditions within the sale. There is also a light partial cut within older stands intended to help move the stands towards a desired complex condition. The anticipated harvest acres, volume, and revenue for each proposed operation in this AOP are listed in the “Harvest Operations – Financial Summary” Table A-1 in Appendix A.

Table 2. Accomplishment of AOP Harvest Volume Compared to IP Annual Objective (MMBF)

Fiscal Year	IP Annual Objective	AOP Planned Volume	AOP Sold Volume	Cumulative Difference from Objective ¹
FY 12	61	59.0	61.2	+0.2
FY 13	61	65.8	63.0	+2.2
FY 14	61	59.0	63.4	+4.6
FY 15	61	56.6	64.9	+8.5
FY 16	61	58.1	57.7	+5.2
FY 17	61	56.1	55.4	-0.4
FY 18 ²	61	65.5	67.4	+6.0
FY 19	61	56.5	54.5	-0.5
FY20	61	61.5		

1. IP Harvest Objective versus Sold Volume.

2. An alternate operation was added to the AOP Planned Volume.

Overview of Structural Components

The guidelines for managing structural habitat components listed under Landscape Management Strategy 3 in the NWO State Forests Management Plan (pg.4-52) will be followed for the FY20 AOP.

Structural habitat components such as green trees, snags and down woody debris (DWD) are considered for all harvest prescriptions; however, most intentional development and retention of structural components is done within regeneration harvest units.

The green tree retention target for regeneration harvest units is five trees per acre. This equates to 7,215 green trees retained within this AOP. Green tree arrangements for this AOP may include; scattered individual trees, clumps of trees, and trees concentrated in and adjacent to riparian management areas. The final decision on the location and arrangement of the green trees is made while the sale is being laid out to incorporate information on potential minor tree species, unique stand features, steep slopes, visual considerations, reforestation considerations, etc.

The Forest Grove district began leaving green trees within clearcut units in 1987, 14 years prior to the Forest Management Plan. Green tree retention levels began at one tree for every 2 acres of harvest and quickly increased up to the current level of five to seven trees per acre.

In 1992 the district began to incorporate tree topping in our timber sale contracts. Since that time there have been thousands of trees topped to create hard snags on the Forest Grove district. The FMP strategy for hard snags is to manage for at least two per acre on average across the landscape. The need for snag creation for regeneration sales is evaluated on a sale by sale basis. The wind events of 12/06, 11/07, & 12/07 and the snow/ice event of 1/17 made significant contributions to snag and DWD levels despite the salvage of some large concentrations of blow down. This in turn led to scattered bark beetle outbreaks resulting in additional tree mortality during 2009. The majority of beetle caused mortality is located within

the McGregor, Wheeler, and Upper Salmonberry Basins. Minor amounts were observed in Larch Mtn., Gales Creek, and Roger's Basins. Based on these observations, snag creation will only be required on planned sales in the Sunday Creek Basin, Wilark Basin, Scoggins Basin, and portions of Gales Creek and Roger's Basins. A total of 550 manmade snags greater than 15 inches in diameter will be created with this AOP.

Beginning in 1997, the district restricted windthrow salvage to large concentrations and roadsides allowing DWD to accumulate across the landscape. While landscape DWD levels are still below the FMP targets, it is believed that over time these targets will be achieved through a combination of natural processes and the ODF salvage policy. The FMP strategy for DWD is to retain an average of 600 to 900 cubic feet of hard conifer logs (class 1 & 2) per acre during regeneration harvest. Stand Level Inventory (SLI) data indicates that there is approximately 200 cubic feet of Class 1 & 2 DWD per acre over the district. These numbers do not include additions from recent wind events or all of the snags & DWD created with recent timber sale contracts. In 2008 the district completed DWD surveys on ten recently completed modified clearcut units. Class 1 & 2 DWD amounts ranged from 600 to 1,700 cubic feet per acre. This shows that our current practices are meeting the down wood strategy.

Another opportunity for natural recruitment of snags and DWD is created by laminated root rot disease (*Phellinus weirii*). In severe cases of root rot, we attempt to retard the spread of the disease by cutting out the infected trees. In other cases, we do not cut out the infected trees. This allows the disease to spread at a rate of approximately one foot per year, slowly adding snags and DWD to the stand. Whether laminated root rot is treated or untreated, we know from experience that additional trees will be infected by the disease, creating snags and eventually DWD.

Within a given annual operations plan, snags and DWD may be retained at higher levels in some units and at lower levels in other units, with the intent of achieving the landscape targets outlined in the Forest Management Plan strategies. The estimates used in the pre-operation reports for existing snags and DWD are based on our inventory for the sale area or on the basin average when not available for the sale area. The estimates for post-harvest expectations are based on contract requirements, monitoring results, and SLI data from the previous ten years of regeneration harvests. Stand Level Inventory data collected on sales harvested over the past 10 years show an average of 665 cubic feet per acre of Class 1 and 2 DWD for regeneration harvest units, and 605 cubic feet per acre of Class 1 and 2 DWD for partial cut units. These post-harvest DWD results can be attributed to natural recruitment from green tree retention, residual logging slash, and tree topping. A total of 1,074,750 cubic feet of sound down wood will be added to the forest as part of the FY 20 AOP.

Harvest Operations within Terrestrial Anchor Sites and Aquatic Anchors

The 2011 IP implemented the State Forests' Species of Concern Strategies that specifically identifies fish and wildlife species of concern on the Tillamook State Forest. Two of these strategies are Terrestrial Anchor Sites (TAS) and Aquatic Anchor (AA) sites.

- Terrestrial Anchor Sites (TAS) areas are 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 be limited, to emulate natural small-scale disturbance patterns, and to minimize short-term negative impacts to

habitat. All areas that were designated as TAS were designated for the development of complex structure in the Landscape Design.

- 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. The 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 to ensure the harvest prescriptions and rate is consistent with the goals of these strategies.

Terrestrial Anchor Sites

Since the adoption of the TAS in the July 2011, the district has been proceeding with operations in these areas. Great care has been given in selecting stands for harvest and developing prescriptions in these areas to ensure that these harvest activities achieve the goals of the TAS. These sales were reviewed with ODF and ODFW Resource Specialists. Table 3 shows there is a small partial cut within the TAS proposed in the 2020 AOP and also shows the cumulative operations in TAS since the strategy was adopted (AOPs 2012 through 2020). Partial cuts have occurred within the Upper Salmonberry and Wolf Creek TAS in previous fiscal years.

Table 3. Summary of Harvest Operations within TAS (Acres and Percent)

Acres within TAS	Current AOP (FY 2020)		Cumulative Harvest (Since FY 2012)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
AOP Acres	1,443	300	10,699	6,422
% of District Acres	1.3%	0.3%	9.3%	5.6%
South Fork Wilson (2,081 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Upper Salmonberry (3,097 ac)	0	0	0	365
% of Acres	0%	0%	0%	11.8%
Wolf Creek (4,199 ac)	0	72	0	646
% of Acres	0%	1.7%	0%	15.4%
All TAS (9,377 ac)	0	72	0	1,011
% of Acres	0%	0.7%	0%	10.8%

Aquatic Anchors

The AAs became effective July 1, 2013 and replaced the Salmon Anchor Habitat Strategy that expired June 30, 2013. Great care has been given in selecting stands for harvest and developing prescriptions in these areas to ensure that these harvest activities achieve the goals of the AA's. These sales were reviewed with ODF and ODFW Resource Specialists. Table 4 shows the current harvest and the cumulative total from FY 2014. Increased water protection

measures will be implemented on regeneration harvest operations planned within the AA's as specified in the Species of Concern strategy.

Table 4. Summary of Harvest Operations within AA (acres and percent)

Acreages	Current AOP (FY 2020)		Cumulative Harvest (since FY 2014)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
AOP Acres	1,443	300	8,624	3,605
% of District Acres	1.3%	0.3%	7.5%	3.1%
Aquatic Anchor (AA) Basins				
Ben Smith Creek (2,410 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Devils Lake Fork Wilson River (6,132 ac)	77	0	401	118
% of Acres	1.3%	0%	6.5%	2%
Elkhorn Creek (1,049 ac)	108	0	108	0
% of Acres	10.3%	0%	10.3%	0%
Lousignont Creek/Upper Nehalem River (12,355 ac)	159	0	1,700	1,256
% of Acres	1.3%	0%	13.8%	10.2%
S. Fork Salmonberry River (5,659 ac)	0	0	86	260
% of Acres	0%	0%	1.5%	4.5%
Upper Rock Creek (3,295 ac)	0	0	87	0
% of Acres	0%	0%	2.6%	0%
All Aquatic Anchors (30,900 ac)	344	0	2,391	1,634
% of Acres	1.1%	0%	7.7%	5.2%

Summary of Timber Harvest Operations by Basin

In the following section, the harvest operations planned for FY20 will be summarized in the context of the eleven management basins on the Forest Grove District. ODF and ODFW resource specialists reviewed the FY20 AOP and provided input. Individual pre-operation reports include information regarding volume, wildlife, streams, roads and other considerations. Since the Forest Management Plan strategies provide standards for structural components such as green trees, snags, down wood as well as riparian protection, these are not discussed in the summary. Road strategies and standards are discussed in the Forest Roads Management section. Additional information regarding the harvest operations may be found within Table A-2, the Forest Resources Summary in Appendix A.

Table 5. Summary of Timber Harvest Operations in each basin. All values are in net acres.

Basin	2020 AOP	
	Partial Cut	Clearcut
Bell Mountain	0	0
Isolated Tracts	0	0
Gales Creek	0	0
Larch Mountain	0	113
McGregor	0	205
Rogers	0	410
Scoggins Creek	0	0
Sunday Creek	0	300
Upper Salmonberry	0	69
Wheeler	72	251
Wilark	225	95
Totals	297	1,443

Bell Mountain Basin

No harvest operation is planned for this basin.

Isolated Tracts Basin

No harvest operation is planned for this basin.

Gales Creek Basin

Round Squared ALT: Approximately 20 acres of this sale is located within the Gales Creek Basin. The full sale description can be found under the **“Wheeler Basin”** heading further into this document.

Larch Mountain Basin

Razorback: This is a 113 acre modified clearcut containing 55-60 year-old mixed Douglas-fir and western hemlock stands. Approximately 103 acres of the sale have a current condition of Layered and 10 acres of Understory. The Desired Future Condition of the entire sale is for non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within the sale flow into the Devils Lake Fork of the Wilson River.

No new roads will be needed to harvest this sale. Over 7 miles of road will be improved.

McGregor Basin

French Dip: This is a two unit modified clearcut totaling 205 acres. The stands within the sale are comprised of 68 year-old Douglas-fir, western hemlock and a minor amount of western red cedar. Both units of the sale are currently classified as Understory condition with a Desired Future Condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams from Unit 1 flow into South Fork Clear Creek. Streams within Unit 2 flow into North Fork Wolf Creek.

No new roads will be needed to harvest this sale. Over 5 miles of road will be improved in conjunction with this sale. A spur road will be blocked following the completion of harvest.

Mac's Back (ALT): This is a 111 acre modified clearcut containing 70-76 year-old Douglas-fir stands mixed with western hemlock, western red cedar and some red alder. Approximately 90 acres of the sale have a current condition of Understory and the remaining 21 acres are Layered. The Desired Future Condition of the entire sale is for non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into Rock Creek. A portion of this sale is located within the Upper Rock Creek Aquatic Anchor (AA). The small, perennial, non-fish bearing streams within this portion of the sale will be protected with 50 foot no harvest buffers as per AA strategies.

Two short spur roads totally 0.15 miles will be constructed to facilitate the harvest. A little over 1.6 miles of road will be improved.

Rogers Basin

Power Trip: This is a two unit modified clearcut totaling 183 acres. The sale is made up of 63 to 68 year-old Douglas-fir trees. The stands within this sale are currently classified as Understory with a Desired Future condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within the sale flow into a tributary of the South Fork of the Wilson River.

Approximately 0.26 miles of road will be constructed to aid in the harvest. Over 1.5 miles of road will be improved in conjunction with this sale.

Transmission lines run along the south edge of Unit 1 and will require extra consideration during sale layout and harvesting. There are also power boxes along the road into Unit 1 and a remote weather station is located at the end of the road. These will be protected during, felling, harvesting and hauling.

Electric Horseman: This is a three unit modified clearcut totaling 110 acres. The sale is made up of 59 to 64 year-old Douglas-fir trees. The stands within this sale are currently classified as Understory with a Desired Future Condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Approximately 0.6 miles of spur roads will be constructed to facilitate the harvest of this sale. Following the completion of harvest, 0.2 miles of the constructed spur roads will be vacated and 0.2 miles will be blocked.

Streams within this sale flow into Elliot Creek. Units 2 & 3 of this sale are located within the Devils Lake Fork Wilson River Aquatic Anchor (AA). The small, perennial, non-fish bearing streams within this portion of the sale will be protected with 50 foot no harvest buffers and the small fish bearing stream will be protected with at least a 100 foot no harvest buffer as per AA strategies.

There are two non-motorized trails and one motorized trail that run through this sale. The Marketing Unit will work closely with the Recreation Unit during sale preparation and contract writing to minimize impacts to the trails.

Devil Ray (ALT): This is a three unit modified clearcut totaling 189 acres. The sale is made up of 54 to 64 year-old Douglas-fir trees. The stands within Units 1 & 3 are currently classified as Layered and Unit 2 is classified as Understory. Approximately 7 acres of Unit 1 have a Desired Future Condition (DFC) of Layered. Unit 2 and the remaining acres of Unit 1 have a DFC of non-complex stands. Unit 3 has a DFC of OFS. The DFC of complex stands within this sale are proposed to be changed to a DFC of non-complex stands. Please see Appendix G for more information regarding these proposed changes. Following the completion of the harvest, the sale will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Approximately 0.62 miles of spur road will need to be constructed to help facilitate the harvest of this sale. Following the completion of harvest, 0.2 miles of road will be blocked.

Streams within this sale flow into Devils Lake Fork Wilson River. Units 2 & 3 of this sale are located within the Devils Lake Fork Wilson River Aquatic Anchor (AA). The small, perennial, non-fish bearing streams within this portion of the sale will be protected with 50 foot no harvest buffers as per AA strategies.

Rootless Rogers (ALT): This is a two unit modified clearcut totaling 201 acres. The sale contains 65 to 70 year-old Douglas-fir trees. The stands within this sale are currently classified as Understory with a Desired Future Condition of non-complex stands. Following the completion of harvest, the sale will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Approximately 0.9 miles of spur road will need to be constructed to help facilitate the harvest of this sale. A little over half a mile of road will be improved in conjunction with this sale.

Streams with this sale flow into Gales Creek.

A motorized trail runs through a portion of Unit 2. The Marketing Unit will work closely with the Recreation Unit during sale preparation and contract writing to minimize impacts to the trail.

Scoggins Creek Basin

Mainly Sain (ALT): This is a three unit modified clearcut totaling 144 acres. The sale consists of 66 to 75 year-old Douglas-fir trees. The stands within this sale are currently classified as Understory with a Desired Future Condition of non-complex stands. Following the completion of harvest, the sale will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

No new roads will be needed for this sale.

Streams within this sale flow into Sain Creek.

Sunday Creek Basin

Willy-nilly: This is a two unit modified clearcut totaling 189 acres. The mixed conifer trees within this sale range in age from 61 to 68 years-old. The current stand condition is classified as Understory. The Desired Future Condition of both harvest units is for non-complex stands.

Following harvest, both units will be planted with a mixture of Douglas-fir and western hemlock seedlings.

Streams within this sale flow into the Middle Fork of the North Fork of the Trask River and the North Fork of the North Fork of the Trask River.

A little over a half mile of new spur road will be constructed to facilitate the harvest. These roads will remain open during reforestation activities and will be evaluated for closure when reforestation is complete.

Prime Stein: This is a 111 acre modified clearcut containing 67-70 year-old mixed conifer stands. The current stand condition is classified as Understory. The Desired Future Condition of the sale is for non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into Elkhorn Creek. This sale is located within the Elkhorn Creek Aquatic Anchor (AA). The small, perennial, non-fish bearing streams within this portion of the sale will be protected with at least a 50 foot no harvest buffers as per AA strategies.

A little over a mile of road will be constructed to facilitate the harvest. Approximately 1.5 miles of road will be improved.

Sunday Best (ALT): This is an 87 acre modified clearcut containing 49-63 year-old Douglas-fir stands. The current stand condition is classified as Understory. The Desired Future Condition of the sale is for non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into the Tualatin River.

Approximately 0.1 miles of spur road will be constructed to facilitate the harvest.

Upper Salmonberry Basin

Sloopy: This is a 69 acre modified clearcut. The mixed conifer stands within this sale are 80 years-old. The current stand condition is Understory. The unit has a Desired Future Condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into the Salmonberry River.

A 0.27 mile spur road will be constructed to facilitate the harvest. A little over 5 miles of road will be improved in conjunction with this sale. Following completion of the harvest, a 0.1 mile spur road will be blocked.

Mishmash (ALT): This is a 113 acre modified clearcut. The mixed conifer stands within this sale are between 60-75 years-old. The current stand condition is Understory. The unit has a Desired Future Condition of non-complex stands. The sale will be planted with a mixture of Douglas-fir and western hemlock seedlings following harvest.

Streams within this sale flow into Pennoyer Creek. A portion of this sale is located within the Lousignont Creek/ Upper Nehalem River Aquatic Anchor (AA). There are no streams located within the sale in the location of the AA.

A little over half a mile of spur roads will be constructed to facilitate the harvest. Approximately 3.4 miles of road will be improved in conjunction with this sale. Following completion of the harvest, a 0.04 mile spur road will be blocked.

Wheeler Basin

Pork Belly: This is a 92 acre modified clearcut. The mixed conifer stands within this sale are 79 years-old. The current stand condition is Understory. The unit has a Desired Future Condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into Wolf Creek.

Approximately 0.3 miles of spur roads will be constructed to facilitate the harvest. A small amount of road (0.27 miles) will be improved in conjunction with this sale.

Hindsight: This is a 104 acre modified clearcut. The mixed conifer stands within this sale are between 60 and 84 years-old. The current stand condition is Understory. The unit has a Desired Future Condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into Morgan Creek. This sale is located within the Lousignont Creek/ Upper Nehalem River Aquatic Anchor (AA). The small, perennial, non-fish bearing streams will be protected with 50 foot no harvest buffers and the small fish bearing stream will be protected with a 100 foot no harvest buffer as per AA strategies.

No new road construction is needed for this sale.

Wolfsam: This is a two-unit light partial cut totaling 72 acres. The mixed conifer stands within the sale are between 74 and 85 years-old. The sale is currently classified as Understory. The Desired Future Condition is for Older Forest Structure.

Wolfsam is located within the Wolf Creek Terrestrial Anchor Site (TAS). This sale is a light partial cut targeting the removal of pole products (from overstory Douglas-fir trees) and will continue the stands along the complex structure pathway and fit within the management guidelines for a TAS. Western hemlock, western red cedar, red alder and big leaf maple trees will be reserved from harvest. These species are typically found in the understory or are co-dominant trees within the stand. Reserving these from harvest will maintain the current structure within the stand. In some areas no harvesting may occur and in other areas a percentage of the overstory Douglas-fir trees will be removed. Some sound down wood will be left within the unit as a result of the operation.

Streams within the sale flow into a tributary of Wolf Creek.

Approximately 0.45 miles of spur road will be constructed to aid in harvest, with 0.15 miles of these spur roads vacated following the completion of the sale.

Corner Pocket: This is a two-unit 55 acre modified clearcut. The mixed conifer stands within this sale are 87 years-old. The current stand condition is Understory. The unit has a Desired Future Condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into the Nehalem River. This sale is located within the Lousignont Creek/ Upper Nehalem River Aquatic Anchor (AA). The small, perennial, non-fish bearing streams will be protected with 50 foot no harvest buffers as per AA strategies.

No new road construction is needed for this sale.

Rooster Cogburn (ALT): This is an 87 acre modified clearcut. The mixed conifer stands within this sale are between 68 and 84 years-old. Approximately 62 acres within the sale are currently classified as Understory with the remaining 25 acres classified as Layered. The entire unit has a Desired Future Condition of non-complex stands. Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Streams within this sale flow into the Nehalem River. This sale is located within the Lousignont Creek/ Upper Nehalem River Aquatic Anchor (AA). The medium fish bearing stream will be protected with a 100 foot no harvest buffer as per AA strategies.

Approximately 1.27 miles spur road will be constructed to facilitate the harvest. Almost 2 miles of road will be improved in conjunction with this sale.

Round Squared (ALT): This is a two unit modified clearcut totaling 78 acres. The Douglas-fir stands within this sale are between 62 and 68 years-old. The stands within the sale are currently classified as Understory with a Desired Future Condition of non-complex stands. Following the completion of harvest, the sale will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

There are no known streams within the sale.

A small 0.06 mile spur road will be constructed to facilitate the harvest. Almost 2 miles of road will be improved.

Wilark Basin

Star Date 2020: This is a 95 acre modified clearcut. This stand consists of 78 year-old mixed conifers. The current stand condition is Understory with a Desired Future Condition of non-complex stands. The sale will be replanted with a mixture of Douglas-fir and western hemlock seedlings following harvest.

Two new spur roads totaling 0.32 miles will be constructed to facilitate harvest. Approximately 0.9 miles of road will be improved in conjunction with this sale.

Streams within this sale flow into the Clatskanie River.

Transmission lines run adjacent to the sale and will require extra consideration during sale layout and harvesting.

Alpha Quadrant: This is a three unit moderate partial cut totaling 225 acres. The mixed conifer stands are between 33 and 36 years-old. This is a first entry partial cut designed to improve the growing conditions of the stand. The current condition of the stands within the sale is Understory with a Desired Future Condition of non-complex stands.

No new road construction is needed for this sale.

Streams within Units 1 and 3 flow into Oak Ranch Creek. Streams within Unit 2 flow into the Clatskanie River.

Transmission lines run through the middle of Units 1 and 3 and will require extra consideration during sale layout and harvesting.

Forest Roads Management

Overview

The district's primary road network is an established system that has been in place for over twenty years. It provides access for forest management activities, fire suppression, and recreation. Visions, guiding principles, and goals for managing the district's road network are discussed in the Northwest Oregon State Forests Management Plan (April 2010) and the State Forest Roads Manual (July 2000). The State Forest Roads Manual also provides standards and guidance for all road management activities and definitions, road classifications and other terms.

The district's total road system consists of mostly collectors and spurs; in total approximately 757 miles of mostly single-lane roads with turnouts. Many of the district's main roads (collectors) were originally built as railroads and then converted to truck roads in the 1940s and 1950s to standards considerably less stringent than those applied today. These roads were originally often constructed with inadequate drainage systems, poor surfacing, and little regard for slope stability and fish passage. Most of these roads have been upgraded and now have rock surfacing, and improved width and alignment. There are still a few roads that are a legacy from those earlier decades and need improvement, access restriction, or vacating.

Road drainage structure improvement continues district wide. The district is in the process of inventorying all road culverts; 717 miles have been inventoried. The culvert inventory will help identify such issues as maintenance needs, undersized culverts, and connected ditchlines. A connected ditchline is where ditch water flows directly into streams, resulting in increased sediment. Cross drain culverts are installed just before stream crossing culverts and direct water onto the forest floor away from live streams.

Almost all of the road work in this AOP is related to constructing spur roads and for improving haul routes for the FY20 timber sales. In addition, the District road crew will be maintaining roads not used for timber sales. Timber sale associated road work is summarized in the Forest Roads Summary Table A-3.

Identification and control of invasive weeds, mostly scotch broom, is a priority during this fiscal year. The District has been inspecting roads for presence and severity of scotch broom on District roads as limited resources are available.

Under this plan, 3.9 miles of road will be constructed, and 37.3 miles of road will be improved. Of the roads to be improved, all are collector or spur roads that are part of the existing road system and will be improved to maintain current road standards.

Road Construction

Road construction and improvement identified in this plan will be primarily achieved through project work connected with timber sales.

There are 3.9 miles of new rocked construction in the AOP. Construction costs are estimated at \$274,200. Most of these spur roads will be constructed on gentle slopes. New LiDAR based slope information was helpful in locating roads away from locally steep slopes.

Road Improvement

Approximately 37.3 miles of road will be improved as part of the FY20 primary timber sales.

The majority of this improvement work will be performed on collector and spur roads and will consist of installing new cross drains and disconnect culverts, replacing culverts, ditchline improvements, and new surfacing. Improvement costs are estimated at \$1,789,100.

Road Access Management

Approximately 0.7 miles of road will be vacated or blocked as part of timber sales in this years' AOP. Upon completion of logging, 0.3 miles of rocked roads will be blocked and 0.4 miles of dirt roads will be blocked. Roads continue to be planned to reduce conflicts with recreational uses, and keeping the correct users on the correct road or trail, reducing conflicts when trails cross or use roads. Upon completion of Reforestation activities, additional roads will be evaluated for closure. Total road blocking projects are estimated at \$3,000.

Gates will be installed in several locations to improve management of public use. Gates will be installed at major access points to the forest: McGregor, North Fork Wolf Creek, Drift Creek, and Storey Burn Roads. The purpose of these gates is for fire prevention. These gates will be closed during periods of Extreme Fire Danger or for public safety reasons. Gates will also be installed in 3 locations in the Carlson Creek/South Lousignont Road area and at both ends of Music Road to restrict vehicle access by the public. The purpose of these gates is to prevent target shooting, dumping, and long term campers. These activities are detrimental in this area due to adjacent homes in the Carlson Creek Area, and proximity to Highway 26 in the Music Road Area. In both cases, the gates will be kept closed, but the public may still access these areas on foot, bike, or horseback. Maps are available by request at the Forest Grove District Office.

Road Maintenance

Roads will be maintained as necessary to protect water quality and the road system asset value. Road maintenance activities will follow the maintenance guidance in Chapter 7 of the Forest Roads Manual and the Forest Practices rules. Road maintenance is accomplished under timber sale contracts for roads used for hauling forest products, and using the district road crew for all other roads. Maintenance is focused on ensuring proper drainage to prevent sediment entering streams. After this, roads are graded to allow efficient forest management and where needed, recreation. Collector roads and roads in active sale areas need and get the most maintenance. District personnel respond to heavy storms and thaw periods by performing road inspections, additional maintenance, and where necessary, stopping heavy truck use during periods when roads cannot handle traffic without damage to water quality or the road asset.

Management of Rock Source/Supply

Forest Grove provides durable rock for in-sale spurs and haul routes which allows for year-round harvest opportunities. Forest Grove has numerous rock pits and stockpiles of varying quality spread across the District.

Rock Type	Total # on District	# of Rock Sources in FY20	Approximate Total Volume in FY20(cubic yards)
Durable Crushed Rock Pits	8	2	47,400
Marginal Crushed Rock Pits	4	2	26,700
Diggable Pit-run Rock Pits	15	1	5,600
Commercial Rock Sources	-	3	8,600
Stockpiles	16	6	14,200

Overburden removal, drilling, and blasting are required in all of the Durable and Marginal Crushed Rock Pits to be used in FY20.

Annually, the District requires between 4,000 to 8,000 cubic yards of crushed rock stockpiles for appraised road maintenance work. The District will continue to explore new rock sources and further development of existing rock pits in FY20.

Land Surveying

For the FY20 AOP, no property line surveys are required.

Young Stand Management

The district's strategy is to use silvicultural tools to establish and maintain diverse stands of well-adapted natural species throughout the landscape to meet the objectives and goals in the Forest Management Plan and Forest Grove District Implementation Plan. These tools include site preparation, planting, animal damage control, vegetation management, pre-commercial thinning, and interplanting or replanting. Each practice must be considered and prescribed for individual stands on a site-specific basis.

This section describes the types and anticipated amounts of reforestation and young stand management activities that will occur in FY20. Also refer to the attached Young Stand Management Table (Appendix A, Table A-4) for further details. The location and amount (acres) of these activities are estimates based on plans, information and conditions as known at this point in time. The type, amount and specific stand management prescriptions will be further adjusted based on when existing harvest units are completed and on updated assessments and surveys that will occur during and after the 2019 growing season.

Reforestation activities will be completed by using experienced contractors. Also, a portion of the activities will be completed by utilizing inmate crews from South Fork Camp. South

Fork Camp is a correctional facility that has joined in a cooperative effort between the Department of Corrections and Oregon Department of Forestry located west of Forest Grove near Highway 6. These crews work on such activities as, planting, inter-planting, tree protection, mechanical hand release, and noxious weed control.

Site Preparation

These activities prepare the planting sites so new stands can be effectively established. Treatments include slash burning, mechanical site preparation, and chemical treatments.

- 1) Pile Burning: Harvest units completed in 2018 and 2019 will be considered for burning of landings and piles to reduce fire hazard and create additional planting spots within the units. Post-harvest assessments will determine the actual necessity to burn.
- 2) Mechanical Site Preparation: There are 10 units that may need some amount of mechanical site preparation, up to 230 acres, which is included in the timber sale contract. The scheduled units are Frog Holler, Salmonbelly, Moving Music, Upper Deck, Step Over, Bell Bottom, Sunday Passage, Cochran Bull, Ground Round, and Rock Rabbit. Portions of the units have relatively gentle terrain that can be accessed by equipment to accomplish site preparation without causing significant soil compaction.

Mechanical site preparation may include slash manipulation or piling and reduction of competing vegetation. It is utilized where slopes are less than 35%, brush and/or harvesting debris prevent the planting and establishment of the desired number of trees per acre and burning is either costlier or impractical due to poor control boundaries or smoke management restrictions. Planting spots are created in a fairly even distribution.

- 3) Chemical Site Preparation: This method of site preparation is used when it is found to be the most cost effective method to control vegetation that would severely impact the survival and growth of newly planted seedlings. The objective is to control brush species to allow stand establishment and maintain 2-3 years free of significant competing vegetation. The current estimate is for approximately 1,180 acres. The actual site preparation plan will be prepared in late spring when harvest unit availability and brush development is better known. Approximately 90% of the chemical site preparation will be completed by helicopter spraying, while 10% will be done using ground base methods where aerial application is not cost effective or to protect adjacent ownership or specific resources (i.e. water).

Seedlings / Nurseries

In order to meet the goals of the Forest Management Plan, the State Forests Program requires tree seedlings that are physiologically healthy and best suited for the planting sites. The Reforestation Unit is responsible for determining the appropriate species and stock type to meet management objectives. The tree seedlings will be grown at five nurseries and compose of 52% bare root and 48% plug stock for planting in FY20. The majority of the species will be 70% Douglas-fir while approximately 30% will be comprised of western hemlock, western red cedar, grand fir, and noble fir. The district scheduled 625,000 seedlings to be planted in FY20.

Planting

Initial Planting: Planting activities establish the desired species and stocking levels to meet the goals in the Forest Management Plan. Seedlings are planted in modified clearcuts, areas that have had *Phellinus weirii* treatment, and stands where current stocking does not meet Forest Management Plan goals.

- 1) Initial Planting (Clearcut Units): There are an estimated 1,290 acres that will be planted during FY20. All of these sites will be planted to allow for the establishment of stands that can be managed to provide complex structure. A mix of transplant and plug Douglas-fir seedlings will compose 70%-85% of the planting stock on these sites where root rot is not a concern. Other native species will be selected and either mixed with the Douglas-fir or planted on micro sites for which they are best suited. These species include noble fir, grand fir, western hemlock, and western red cedar plug stock. Where root rot is a concern, resistant and immune species will be planted such as, western red cedar and western hemlock. Phellinus surveys prior to harvest helps us make these types of treatment decisions. The objective of planting a variety of species is to create a healthy and diverse stand by placing tree species on sites for which they are well adapted and where they will experience a high rate of survival and growth. The majority of the planting will be completed by contractors, while approximately 15% will be done by utilizing South Fork inmate crews.
- 2) Interplanting: The interplanting objective is to raise stocking in young plantations that are below acceptable levels, to a minimum of 300 trees per acre. Surveys are conducted one and two years after initial planting to determine interplanting needs. Where necessary, interplanting is done the following winter. During the spring and fall of 2019, surveys will be conducted to determine interplanting needs for the 2020 planting season. The current estimate is 200 acres, based on historical averages. Approximately half of the project will be done by utilizing South Fork inmate crews, while the other portion will be done by contractors.
- 3) Underplanting: None planned in FY20.

Vegetation Management

Vegetation management is done to reduce light or moisture competition in a young stand of trees to improve survival and growth. Vegetation management may be required to meet forest practices reforestation stocking requirements, the NW Oregon State Forests Management Plan and the Forest Grove District Implementation Plan.

Vegetation management can be categorized as manual cutting, aerial application of herbicides, and ground-based application of herbicides. Each method is tailored to the location and vegetation control needs and all three are valuable tools used to manage vegetation in young stands. For noxious weed control, ground based application of herbicides will be the most effective and common treatment, although manual cutting is also used in some circumstances.

Emphasis is being put on site preparation and planting the first season following timber harvest, resulting in better performance of trees in planted units, a reduced need for follow-up interplanting or vegetation management, and the opportunity for diverse vegetation to develop along with planted trees. Plantations will be evaluated during the spring and summer of 2019 to determine treatment needs for FY20.

Manual: The current estimate is 350 acres, based on historical averages. This work will be accomplished by utilizing South Fork inmate crews.

Chemical: The current estimate is 300 acres. Any areas that show development of unacceptable levels of competing vegetation will either be treated by helicopter or on the ground by hand.

Tree Protection

Deer and elk, as well as mountain beaver, can heavily damage young stands and prevent meeting Forest Management Plan goals. Various tree protection strategies are applied to help re-establish trees in areas with high concentrations of these species. Most commonly, various types of physical barriers help prevent damage from big game. Also, trapping mountain beaver in highly populated areas prior to planting helps prevent damage to newly planted trees.

Approximately 25 acres of new tube installation and maintenance will be required with the FY20 planting for protection of western red cedar. The bulk of this is located in micro-sites well suited to cedar or in pockets of *Phellinus weirii* (root disease) delineated in harvest units. Bud capping will be required on approximately 200 acres where heavy populations of big game are present. The need for mountain beaver trapping has been projected on approximately 800 acres. Heavy populations are being trapped in harvest units prior to planting. The majority of this work will be accomplished by utilizing South Fork inmate crews.

Pre-commercial Thinning

Pre-commercial thinning (PCT) primary objective is to release trees in overstocked stands by reducing density to prevent stagnation and increase the growth of the remaining trees. Also, the operation will improve the health and vigor of the stands by removing trees with poor form, defect, and disease. In mixed species stands with Douglas-fir heavily impacted by *Phellinus weirii*, species other than Douglas-fir will be favored. Approximately 300 acres of plantations would benefit from PCT during the FY20 AOP period.

Fertilization

None planned in FY20.

Pruning

No pruning is planned for FY20 beyond W. white pine for disease prevention of blister rust. Approximately 40 acres are anticipated. This work will be accomplished by utilizing South Fork inmate crews.

Invasive Species

Reforestation continues to work with the Marketing, Forest Roads, and Recreation Units to identify appropriate steps each unit can take to prevent the introduction and spread of invasive plants. Knotweed, Scotch broom, and false brome are the primary species known to exist in the District. Active control measures are being planned and prioritized for roadside, in-unit, and trail treatment. Funding is limited. Three harvest units are scheduled for site preparation using herbicide treatment as a preventive measure to inhibit the

invasion of scotch broom. They are Voltaire's Flair, Kirk to Enterprise, and portions of Nehalem Breaks, totaling 183 acres.

Roadside Spraying

Reforestation works with the Forest Roads Unit on the management of vegetation alongside forest roads. Vegetation management protects the investment by preventing damage from unchecked vegetation growth, helps to maintain a safe driving environment by maintaining clear sight distance, controls noxious weeds, and reduces fire hazards. Roadside spraying using herbicides is one of the tools used to manage unwanted vegetation along roadways. During the spring of 2019, roadside vegetation surveys will be conducted to determine roadside treatment needs for FY20. The current estimate is 200 miles, based on historical averages. The project will be done by utilizing experienced contractors.

Stocking Surveys

The Reforestation Unit has the responsibility of ensuring that the goals of the Forest Management Plan are met. Stocking surveys is one tool to ensure the stands are on track for the desired future condition. The surveys are done in order to check initial plantation survival at a time when the seedlings are vulnerable and there is still time to remedy problems, by using interplanting and animal damage control measures as examples. In addition, stocking surveys are conducted in order to assess free-to-grow status and to get baseline data on the stand for future management planning, for example evaluating release treatments and pre-commercial thinning candidates.

Approximately 2,500 acres of stocking surveys are planned during the fall on young stands.

Recreation Management

Overview of Recreation Management

Recreation use has been taking place on the Tillamook State Forest and the Forest Grove District for more than 60 years and has been managed in varying degrees since the 1960s. Currently the direction for management of the Recreation program flows from the Northwest Oregon State Forest Management Plan (2001), the Tillamook State Forest Comprehensive Management Plan (1993), and the Recreation Action Plan 2000 (2001). Budget levels remain static and Agency focus continues to be on maintaining existing infrastructure and opportunities and developing additional program capacity.

Planned Activities for FY 2020

A new project is being implemented.

Consistent with trail plans, develop a gravity assisted one-way downhill mountain bike trail in the vicinity of Larch Mountain. See Table 8. Non-Motorized Trail Projects.

Facilities

The Forest Grove District plans to operate and maintain the following developed facilities:

- 5 campgrounds
- 2 day use picnic areas
- 2 highway wayside interpretive sites
- 14 trailhead facilities
- Multiple target shooting lanes

All developed facilities will be operated and maintained in good working order and will be kept clean and safe for public use and managed to minimize user conflict and to avoid adversely impacting the resource. The operating season for developed campground facilities will remain consistent with the FY2019 operating season.

Dispersed Use

Each year, a high amount of dispersed recreation use occurs across the Tillamook State Forest. Most of this use is associated with recreation activities such as hunting, camping, angling, sight-seeing, target shooting, swimming, and mushroom picking. Most of these activities take place at specific dispersed use sites. These activities are expected to continue in FY 2020 and will require varying degrees of District staff attention. Dispersed use sites will be monitored, maintained, and improved as resources allow, to meet safety, sanitation, and resource protection objectives.

See Table 6 below for developed and dispersed facility maintenance and improvement projects planned for FY2020.

Table 6. Developed and Dispersed Facility Projects

Project Type	Project Name	Work Resources	Project Description
Facility Improvement	Reehers Camp Kiosk Replacement	District staff / South Fork / Contractor	Project work will involve replacing 2 Kiosks at Reehers Camp
Facility Improvement	Kiosk Roof Replacement	District staff / South Fork / Contractor	Project work will involve replacing the cedar shake roofs on the kiosk at Browns Camp, Gales Creek, SCHC, and Elk Creek with metal roof structures.
Facility Improvement	Reehers Camp Power	Contractor / District Staff	This project will involve installing electric power to the camp host site and the picnic shelter at Reehers Camp
Facility Improvement	Reehers Camp Fee Box Replacement	District staff / South Fork	Replace fee boxes at Reehers Camp
Facility Improvement	CXT Toilet Clean-out Cover Replacement	District Staff, Contractor, South Fork	Project work will involve replacing clean-out covers on bathrooms at Kings Mtn, Browns Camp, Elk Creek, and Gales Creek
Facility Improvement	CXT Toilet Painting	District Staff, South Fork	Project work will involve repainting the CXT toilet buildings in Browns Camp and Rogers Camp Trailhead. Safety and investment protection measure.
Facility Improvement	CXT Door Frames	District Staff	Project work will involve replacing the bottom 8 inches of the door frames at Browns Camp (7), Elk Creek,(2) and Gales Creek (2). Safety and investment protection measure.
Facility Planning, Design, and Development	Reehers Camp Gravel Road Ride Station	Washington County Visitors Association (WCVA), District Staff.	Working with ODF Staff, design and install a bicycle rack and kiosk at the Reehers Camp Day Use Area. This project proposes to design and install a bicycle rack and kiosk information at Reehers Camp Trailhead to support and promote gravel road bicycle riding in the Reehers Camp Area. In collaboration with ODF staff, WCVA would facilitate the design and installation of proposed infrastructure and would fund the project.

OHV Trails

The District will continue to place emphasis on maintenance and upgrade of existing trails, development of partnerships to increase our capacity to manage the trail network, and on upgrading and improving the designated OHV trail network in an effort to better connect the trail system, protect forest resources, re-establish trails after timber harvest, move trail users off the mainline haul and public use roads, reduce trail congestion and the potential for conflict between trail users, improve user safety, improve maintenance efficiency, and reduce infrastructure investments and maintenance workload. Due to trail maintenance needs, winter weather limitations, timber sale activity, and fire season restrictions, some project work from FY2019 is expected to extend into FY2020. Overall OHV program priorities are transitioning to the OHV trail system on the Tillamook District. FY2020 OHV trail projects are identified and briefly described in the following table (Table 7).

Table 7. OHV Trail Projects

Project Type	Project Name	Project Mileage	Work Resources	Project Description
Trail Bridge Improvement	Elliott Creek Trail Bridge #3 Improvement	NA	District Staff / ODF Equipment Operators / Volunteers	Project work will involve replacement of decking, railing, nailing plate, and possibly the sill boards.
Trail System Planning	Cedar Way Trail #16e	½ mile	District Staff / ODF Equipment Operators / Volunteers / Resource Specialists	This project will involve integration planning work to transition the trail to 4WD accessible.
Trail Reroute	7-Up Trail #17	¾ mile	District Staff / ODF Equipment Operators / Volunteers /Resource Specialists	This project will involve integration planning and construction work to extend 7-Up Trail to Hogsback Trail. This project addresses user safety, user conflict, and trail system connectivity issues,
Trail System Planning	Rocky Uphill Trail #28a	½ miles	District Staff / ODF Equipment Operators / Volunteers / Resource Specialists	This project will involve integration planning work to connect two segments of the trail. This project addresses user safety, conflict, and trail system connectivity issues.
Infrastructure Assessment	Trail Bridge Inspections	3 Bridges	Contractor	Project will involve completing inspections of 3 of the 14 OHV trail bridges.

Non-motorized Trails

The District will be focused on making improvements to existing non-motorized trails to address user safety, resource protection, investment protection, sustainability, and user accommodation. Due to trail and facility maintenance needs and South Fork and District staff capacity, some project work from FY2019 will extend into FY2020. FY2020 non-motorized trail projects are identified and described in the following table (Table 8).

Table 8. Non-Motorized Trail Projects

Project Type	Project Name	Project Mileage	Work Resources	Project Description
Trail Improvement	Gales Creek Trail Segment C Reroute	¾ - 1 mile	District Staff and South Fork	This project will involve construction of a ¾ to 1-mile-long reroute to eliminate chronic maintenance issues, and improve trail flow and sustainability.
Trail Development	Excalibur Mountain Bike Trail	3 miles	Volunteers, District Staff, Resource Specialists	This project would involve construction of a gravity assisted one-way downhill mountain bike trail. The mountain bike community would complete fundraising, trail location, design, and construction work necessary to complete the project. The community, through an Adopt a Trail agreement, would commit to maintaining and managing the trail once constructed.
Infrastructure Assessment	Trail Bridge Inspections	11 Bridges	Contractor	Project will involve completing inspections of 11 of the 41 non-motorized trail bridges.

Trail Maintenance (OHV and Non-motorized)

Maintenance of existing trails remains our highest trail program priority. Trails will be maintained as necessary to protect investment, address developing resource and safety issues, and to protect water quality. Trail maintenance activity includes the completion of trail condition assessments on all trails, development of maintenance strategies, and completion of maintenance work. Basic trail maintenance work typically involves cleaning water bars and rolling dips, cleaning out culverts, trail tread work, cleaning trail bridges, clearing downed trees, brushing, and sign replacement. Heavy trail maintenance work, which typically results from winter storms, includes repairing trail bridges, reestablishing trail tread in slide or washout areas, rebuilding stream ford crossings, clearing and logout work associated with heavy concentrations of downed trees, and rerouting trails due to slides, washouts, or safety issues.

The District expects to complete condition assessments and trail clearing maintenance on all trails (114 miles OHV and 66 miles non-motorized) and will complete user safety and resource protection maintenance as needed. Other basic trail maintenance work is completed on most trails every two or three years. Approximately 30% to 40% of the network will receive basic trail maintenance attention in FY 2020.

Volunteer Program and Partnerships

The recruitment and use of volunteers is critical to the overall success of the recreation program. The district currently manages a Volunteer Program that includes the following recreation oriented sub-programs:

Camp Host	Trail Maintenance and Construction Work Parties
Adopt a Trail	OHV Trail Equipment Volunteer Operator
Forest Clean-up	Trail Patrol

Activities associated with the volunteer program will include the recruitment, selection, and management of campground hosts; planning and management of trail maintenance, trail development, and special volunteer projects; facilitation of Adopt a Trail program activities; and management of the Tillamook State Forest Volunteer Trail Patrol program. The Recreation Unit anticipates facilitating between 5,000 and 6,000 hours of volunteer contribution in FY2020.

District staff are also involved in revising and updating the ODF Volunteer Program Manual. This work will extend into FY2020.

ODF and the district will continue to look for opportunities to develop new partnerships and to enhance existing partnerships that will increase our collective capacity to meet program and project goals and objectives.

Event Management

The Forest Grove district permits organized sponsored trail use events. Both motorized and non-motorized trail use events are held on the district. The events consist of poker runs (fun runs), competitive timed motorcycle races, trials motorcycle competitions, and four-wheel drive rallies. Other events, such as equestrian poker rides, mountain bike races, forest road bicycle rides, running races, and archery events are scheduled less frequently. Non-motorized events will be evaluated to determine if the District has the capacity to support proposed event activities. In FY 2020 the district expects to review, permit, and administer 8 to 10 motorized trail use events and 2 to 4 non-motorized trail use events. Motorized events for FY 2020 were

scheduled at a meeting in October 2018. There are no plans to pre-schedule FY 2020 non-motorized events.

Grants

The Recreation Unit expects to apply for and administer several grants in FY2020 to support project and program activity.

- ATV grant to support purchase of OHV trail maintenance equipment. (Administration and Application).
- Land and Water Conservation and RTP grants to support expansion of Kings Mountain Trailhead. (Application and Administration).

The Recreation Unit is also partnering with clubs and organizations that will be submitting grant applications to advance Recreation program work on the Tillamook State Forest.

Target Shooting

The district will continue to work on implementing a target shooting management strategy, in collaboration with our partners and the target shooting community that will:

- Resolve the safety, sanitation, and environmental issues
- Reduce the fire potential associated with target shooting
- Develop public ownership and involvement in the development and implementation of the strategy.
- Maintain safe and sustainable opportunities for recreational target shooting on the TSF

In FY2020, development of additional target shooting lanes and closure of unsafe target shooting sites will flow from this work.

Unplanned Activities

The activities above represent project and program work items for the fiscal year. However, the Agency often receives requests from non-profit and commercial businesses to utilize the forest for their trail use events or business ventures. Any new requests beyond the above described workload will be reviewed and evaluated based on the following criteria, to determine whether or not the request will be permitted:

- Safety
- Risk of environmental damage
- Risk of trail and facility impacts
- Conflict with other forest users
- Conflict with other forest management activity
- Contributions to social, environmental, and economic goals
- Contribution to forest management plan goals
- Risk of fire
- Impacts on law enforcement
- Staff workload
- Opportunity for new partnerships and increased program capacity

Other Integrated Forest Management Projects

Aquatic Habitat Improvement

The Forest Grove District's distinguishing geographic feature is its location in relation to the Coast Range divide. About one-half of the district land base drains to the Pacific Ocean and the other half flows to the Willamette River. Five rivers originate within the district. These include the Nehalem River, Salmonberry River, Wilson River, Tualatin River, and the North Fork Trask River. In addition, nine important tributaries feed into these rivers from within the district: Wolf Creek, North Fork Wolf Creek, Lousignont Creek, North Fork Salmonberry, Gales Creek, Devils Lake Fork, South Fork Wilson, Scoggins Creek, and the North Fork of the North Fork Trask River.

Barney Reservoir lies at the district's southern end and is mostly surrounded by state forest land. Covering approximately 450 acres and with a capacity of 20,000 acre-feet, this reservoir supplies water to much of Washington County.

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: leave 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 6 watersheds in which additional aquatic conservation measures are applied. The Aquatic Anchors include: Upper Rock Creek, Lousignont Creek/Upper Nehalem River, South Fork Salmonberry, Devils Lake Fork Wilson River, Elkhorn Creek and Ben Smith Creek.

Threatened and Endangered Fish Species: Federally Threatened Salmon and Steelhead listed species with Critical Habitat Designations found within the Forest Grove District are Oregon Coast Coho Salmon, Upper Willamette River Chinook, and Upper Willamette River Steelhead.

All fish bearing streams found on the district are subject to the Management Standards for Aquatic and Riparian Areas as outlined in Appendix J found in the Northwest Oregon State Forests Management Plan (2010). An objective of State Forests' aquatic resources is to maintain, enhance, and restore quality fish habitat. This is achieved primarily through riparian buffer strategies specific to the aquatic resource characteristics such as presence of fish, size, and flow duration. The goal of all riparian management prescriptions is to obtain mature forest conditions (e.g., development of the natural community appropriate for that site) as expediently as possible.

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. Streams in the AOP will be evaluated with a Physical Habitat Survey. The physical methodology was developed in conjunction with Oregon Department of Fish and Wildlife. The seasonal/perennial break in the streams will be evaluated during fish distribution surveys or during sale layout.

Aquatic and Riparian Conditions: Watershed assessments have been completed on 3 watersheds 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. The task during this AOP is to identify, design, and implement projects to address the limiting factors either through opportunistic projects (e.g. harvest units adjacent to streams that meet certain criteria) or through larger, multi-collaborator, diversely funded projects.

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 (*Forest Grove District 2011 Implementation Plan, "Aquatic Resources – Stream Enhancement Projects", page 38*). The types of projects in order of priority are: (1) Fish Passage, (2) Road Decommission or Hydrologic Disconnection, (3) Instream Habitat Projects, (4) Alternative Plans to Manage Riparian Areas, and (5) Beaver Relocation. More information on these project types and rationale for priorities is provided in the Forest Grove District IP.

Projects can be planned or 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. All sales will be evaluated for the ability to do in stream habitat projects. Those projects with high benefit and relative lower costs, which are supported by ODFW, will be implemented as resources allow.

For the Forest Grove District, the goals are to:

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

In the FY20 AOP, an initial screen by the ODF Aquatic and Riparian Specialist and District Staff have identified 4 streams within the French Dip, Electric Horseman, Power Trip, and Hindsight sales as potential candidates for restoration projects.

Planned Projects within the FY20 AOP:

- 37.3 miles of road will be improved. This includes installing additional cross drain culverts to hydrologically disconnect the roads from streams as possible.
- 4 stream enhancement projects will be further reviewed by ODF Aquatic and Riparian Specialist and District Staff.

Restoration accomplishments are reported to Oregon Watershed Enhancement Board using the Oregon Watershed Restoration Inventory electronic filing process and reported by ODF annually in our report to the counties, board of forestry, and Division of State Lands.

Land Exchange

There are no active land exchange projects for this AOP.

Law Enforcement and Public Safety

ODF and the Tillamook County Sheriff's Office (TCSO) partner to maintain 3 full time forest deputies that are funded through ATV grants and ODF dollars. Forest Grove District staff work closely with the forest deputies and Tillamook District staff to facilitate law enforcement activity on the district and across the Tillamook State Forest.

The forest deputies enforce state, federal, and forest recreation laws with an emphasis on ATV enforcement as they patrol the forest. Deputies also provide search and rescue services as needed. Fire laws pertinent to recreation use are enforced by county deputies, fire protection, and recreation staff. The forest deputies are essential to the success and overall management of the forest and their presence benefits all forest users.

Forest Grove District staff also work closely with the Washington County Sheriff's Office and Oregon State Patrol to support and facilitate law enforcement patrol, EMS, and search and rescue activities on the Tillamook State Forest in western Washington County

Firewood Cutting Program

The district administers an active public woodcutting program issuing between 2,000 and 3,000 permits annually, generating \$40,000 to \$60,000 in gross revenue. The Forest Grove District will continue to issue personal firewood cutting permits in the coming year for the entire district.

Where:

The entire district will be open to wood cutting as described on the permits **except** for areas shown on maps attached to permits. Areas excluded from wood cutting are sold timber sales, recreation sites, planned operations, ODOT right of way, etc. All of these areas are shown as cross hatch on the maps. The district is divided into four basins for the purpose of issuing firewood permits.

When:

Permits will be issued for 3 week periods, during the months outside the fire season. Wood Cutting will be closed from July 1st until end of fire season.

Who:

Personal firewood cutting permits will be issued with a limit of 5 permits per individual or household per 12 month period (fiscal year, July 1st – June 30th). Oregon Department of Forestry does not guarantee the quality or availability of wood when issuing firewood cutting permits. Permits will be sold and administered to employees under the same process as used by public.

Permit Fee:

The permit cost is \$20 for 2 cords of firewood and is not transferrable to another party.

Non-Timber Forest Products

Approximately 200 miscellaneous forest products permits are sold each year, mostly for salal and mushrooms, generating approximately \$20,000 in revenue. In addition, the district sells a small number of negotiated timber sales. These sales may be utilized for recovery of wind thrown trees, fire killed trees, or when an adjacent landowner needs to purchase right-of-way timber from the state in the event they have been granted permission to construct an access road across state ownership. These special sales usually generate revenues between \$80,000 and \$160,000 annually.

Planning

Below are the significant district-level planning projects currently scheduled for commencement, completion, or both in FY20.

Stand Level Inventory

No SLI data acquisition is planned for FY20.

Fish and Wildlife Surveys

Northern Spotted Owl Surveys

For the FY20 AOP, the Forest Grove District will continue using a density survey program, in order to effectively comply with federal and state Endangered Species Acts and to contribute to Forest Management Plan (FMP) goals. Survey requirements are determined in accordance with *ODF Northern Spotted Owl Operational Policies*, November 2017. Density surveys are accomplished with strategically placed calling stations throughout the district ownership which allows for complete survey coverage of all potentially suitable NSO habitat. Some scattered ownership parcels where no operations are planned may not be covered by the density surveys.

Marbled Murrelet Surveys

In FY20, 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, and survey protocols.

Research and Monitoring

The Forest Grove District will assist in a variety of research and monitoring projects in FY20. Examples include:

- ◆ Red alder research areas.

- ◆ White Pine Blister Rust resistance studies.
- ◆ OSU research areas (commercial thinning and wildlife studies).
- ◆ Commercial thinning and *Phellinus weirii* research areas.
- ◆ Commercial thinning and Swiss Needle Cast study areas.
- ◆ Riparian zone functions study areas.
- ◆ Green tree retention and seedling growth demonstration areas.
- ◆ OSU Intensive Forest Management study.

Recreation Program Planning

In FY2020, staff from the Recreation Unit will be participating in broader planning work for the Recreation, Education, and Interpretation programs. Staff will also be supporting district AOP implementation and development work associated with other district programs.

Other Planning Operations

Other planning activities will include road inventory updates and road closure opportunity plans.

Public Information and Education

Public Information and Involvement

Public information and involvement activities will include:

- Review and input regarding the FY20 Annual Operations Plan.
- Volunteer engagement in trail work parties, trail patrol, Solve cleanups, adopt a trail, adopt a project, camp host programs, and other aspects of the recreation program.
- Recreation project planning and design
- Outreach to underserved or underrepresented groups

Public Education

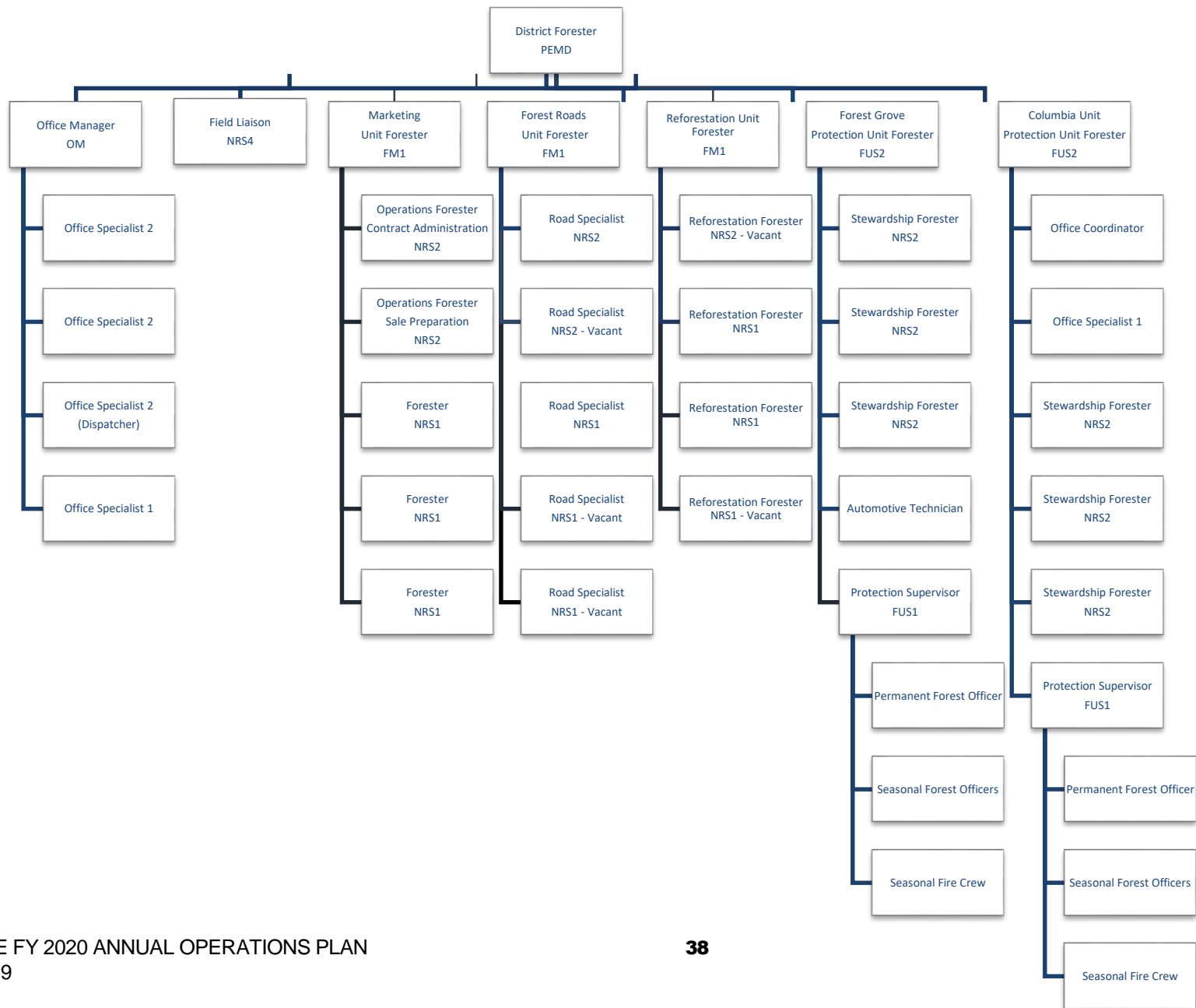
- ◆ The district is involved in a variety of projects focused on informing and educating the public and interpreting the natural and cultural history of the Tillamook State Forest (TSF).
- ◆ Associated activities will include:
- ◆ Maintenance of the Tillamook State Forest web page, the Tillamook State Forest Blog and recreation information phone line.
- ◆ Development of the TSF recreation brochure.
- ◆ Development of the TSF Visitor Map/Guide
- ◆ Development of information board messaging.
- ◆ Updating and reprinting OHV and Non-motorized trail brochures and guides.
- ◆ Development of press releases about Recreation program projects and recreation opportunities on the Tillamook State Forest.
- ◆ Writing articles for user group newsletters, ODF website, The Lookout, and other publications.
- ◆ Developing tools and displays to recognize and recruit volunteers and to inform and educate the public about Tillamook State Forest recreation opportunities.
- ◆ Supporting local OHV user group education programs.

- ◆ Supporting and participating in NWOA Forestry education and interpretive programs.

Administration

The State Forest Program in Forest Grove District is organized into five separate functional work units. The five work units include:

- ◆ **Administration** includes the District Forester, Assistant District Forester, Office Manager and clerical staff. The administrative function provides policy and planning direction, budgeting, coordination between units and programs, oversight to the field units, public contact and clerical support. The office staff is also responsible for assisting with special forest products permits and firewood permits.
- ◆ The **Forest Roads Unit** is responsible for the planning and maintenance of the district State Forest road network, the design and administration of all timber sale road development and the establishment and maintenance of State Forest property lines.
- ◆ The **Forest Management / Marketing Unit** is responsible for the planning, preparation and administration of all State Forest timber sales on the district, planning and administering threatened and endangered (T&E) species surveys, and developing and maintaining GIS data and map products related to these functions.
- ◆ The **Recreation Unit** is responsible for the planning and development of new trails and facilities, management of existing trails and facilities (campgrounds, day-use sites trailheads, and staging areas), development and management of volunteer programs, public contact and information, and monitoring and assessment of overall recreational use patterns.
- ◆ The **Reforestation / Young Stand Management Unit** is responsible for all the planning, prescription determination and administration of all reforestation and young stand management activities on State Forest land, including all the associated monitoring and record keeping.



APPENDICES

A. Summary Tables

1. Harvest Operations – Financial Summary
2. Harvest Operations – Forest Resource Summary
3. Forest Road Management Summary
4. Reforestation and Young Stand Management Summary
5. Recreation Site Management Summary
6. Recreation Trail Management Summary
7. Recreation Grant Management Summary

B. Maps

1. Harvest Operations Vicinity Map
2. Recreation Projects Vicinity Map
3. Recreation Facilities Vicinity Map

C. Consultations with Other State Agencies

This appendix summarizes the results of consultations with the Oregon Department of Fish and Wildlife, Oregon Department of Transportation and other agencies as appropriate.

D. Public Involvement

This appendix will describe the results of the public involvement process of this AOP.

E. Pre-Operations Reports

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

F. Forest Land Management Classification

G. District Implementation Plan Minor Modification – Landscape Design

Appendix A

Summary Tables

- **Table A-1: Commercial Forest Management Operations - Financial Summary**
- **Table A-2: Commercial Forest Management Operations – Forest Resource Summary**
- **Table A-3: Forest Roads Summary**
- **Table A-4: Reforestation and Young Stand Management Summary**
- **Table A-5: Recreation Site Management – Financial Summary**
- **Table A-6: Recreation Trail Management – Financial Summary**
- **Table A-7: Recreation Grant Management – Financial Summary**

TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: Forest Grove

Fiscal Year: 2020

Date: 05/20/2019

Primary Operation	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
	BOF	CSL			Partial Cut	Clear-cut	Conifer	Hardwoods	Total	Gross	Projects	Net
Alpha Quadrant	100%		Col	4	225		1.6		1.6	\$ 596,625	\$163,100	\$433,525
Corner Pocket	100%		Wash	1		55	2.8		2.8	\$ 1,686,600	\$0	\$1,686,600
Electric Horseman	100%		Till	1		110	3.5		3.5	\$ 1,749,000	\$296,900	\$1,452,100
French Dip	100%		Clatsop	3		205	9.4		9.4	\$ 5,174,950	\$323,000	\$4,851,950
Hindsight	100%		Wash	1		104	3.2		3.2	\$ 1,761,650	\$0	\$1,761,650
Pork Belly	100%		Till	4		92	4.0		4.0	\$ 2,001,000	\$148,000	\$1,853,000
Power Trip	100%		Till	2		183	6.0		6.0	\$ 2,881,440	\$80,700	\$2,800,740
Prime Stein	100%		Wash	2		111	4.5		4.5	\$ 2,343,640	\$136,300	\$2,207,340
Razorback	100%		Till	2		113	4.9		4.9	\$ 2,446,500	\$488,400	\$1,958,100
Six Cedars	100%		Till	1		117	4.5		4.5	\$ 2,561,010	\$0	\$2,561,010
Sloopy	100%		Wash	3		39	2.4		2.4	\$ 1,422,376	\$255,830	\$1,166,546
			Till			30	1.8		1.8	\$ 1,086,224	\$195,370	\$890,854
Star Date 2020	100%		Col	4		95	5.0		5.0	\$ 2,998,200	\$73,800	\$2,924,400
Willy-nilly	100%		Wash	3		189	6.4		6.4	\$ 3,066,240	\$403,600	\$2,662,640
Wolfsam	100%		Till	4	72		1.5		1.5	\$ 837,200	\$32,500	\$804,700
Sub-total:					297	1,443	61.5	0.0	61.5	\$32,612,655	\$2,597,500	\$30,015,155
Project WOC Sub-total:					0	0	0.0	0.0	0.0	\$0	\$81,000	-\$81,000
Total:					297	1,443	61.5	0	61.5	\$32,612,655	\$2,678,500	\$29,934,155

Alternate Operations

Devil Ray	100%		Till			189	7.8		7.8	\$3,914,000	\$49,100	\$3,864,900
Mac's Back	100%		Clatsop			111	3.5		3.5	\$1,759,500	\$178,600	\$1,580,900
Mainly Sain	100%		Wash			144	5.0		5.0	\$2,498,500	\$0	\$2,498,500
Mishmash	100%		Wash			113	4.5		4.5	\$2,350,400	\$148,500	\$2,201,900
Rooster Cogburn	100%		Till/Wash			87	4.0		4.0	\$2,121,060	\$388,700	\$1,732,360
Rootless Rogers	100%		Wash			201	5.7		5.7	\$2,854,500	\$89,100	\$2,765,400
Round Squared	100%		Wash			78	2.8		2.8	\$1,400,000	\$40,800	\$1,359,200
Sunday Best	100%		Wash			87	3.5		3.5	\$1,753,000	\$8,000	\$1,745,000

PRIMARY HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

District: Forest Grove

Fiscal Year 2020

Date: 11/21/2018

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

Primary Harvest Operations	Unit (Optional)	Forest Health Issues ¹	Invasive Species	LYR/OFS Structures ²	Landcape 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 (BA Required)	Operating within a MMMA (BA Required)	Murrelet Timber Sale Screening Process Required (MM Policy 2.27)	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
Alpha Quadrant	1, 2, 3		x				x								x						BPA transmission line
Corner Pocket	1, 2		x							x					x						
Electric Horseman	1, 2, 3	x	x							x								x			2 non-motorized and 1 motorized trail, BPA transmission line
French Dip	1, 2		x												x						
Hindsight			x							x					x						
Pork Belly			x												x						
Power Trip	1, 2		x												x		x				BPA transmission line, power boxes and power station
Prime Stein			x							x											
Razorback			x	x																	x
Six Cedars		x	x												x			x			Motorized trail
Sloopy			x							x					x						x
Star Date 2020			x												x						BPA transmission lines
Willy-nilly	1,2		x												x						
Wolfsam	1, 2		x		x		x				x										x

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 inconultation 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

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	Operating within a MIMMA (BA Required)	Murrelet Timber Sale Screening Process Required (MM Policy 2.27)	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
Devil Ray	1, 2, 3		x	x						x								x		x	Motorized trail
Mac's Back			x	x						x											
Mainly Sain	1, 2, 3		x																		
Mishmash			x							x					x						
Rooster Cogburn			x	x						x					x					x	along future Salmonberry Trail
Rootless Rogers	1, 2	x	x															x			1 motorized trail within Unit 2
Round Squared	1, 2		x							x					x						
Sunday Best			x																		

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 inconultation 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.

FOREST ROADS SUMMARY

District: Forest Grove

Fiscal Year: 2020

Date: 05/20/2019

Primary Operations	Construction		Improvement		Other Projects	Total Project Costs	Gross Value of Operation	Total Cost as a percent of Gross Value	Comments
	Miles	Cost	Miles	Cost					
Alpha Quadrant			6.5	\$163,100		\$163,100	\$596,625	27%	
Corner Pocket						\$0	\$1,686,600	0%	
Electric Horseman	0.6	\$48,500	0.3	\$7,400	\$241,000	\$296,900	\$1,749,000	17%	
French Dip			5.2	\$240,800	\$82,200	\$323,000	\$5,174,950	6%	
Hindsight						\$0	\$1,761,650	0%	
Pork Belly	0.3	\$21,300	0.3	\$6,700	\$120,000	\$148,000	\$2,001,000	7%	
Power Trip	0.3	\$25,600	1.6	\$55,100		\$80,700	\$2,881,440	3%	
Prime Stein	1.1	\$75,600	1.5	\$60,700		\$136,300	\$2,343,640	6%	
Razorback			7.2	\$433,400	\$55,000	\$488,400	\$2,446,500	20%	
Six Cedars						\$0	\$2,561,010	0%	
Sloopy	0.3	\$21,300	5.4	\$424,900	\$5,000	\$451,200	\$2,508,600	18%	
Star Date 2020	0.3	\$22,600	0.9	\$51,200		\$73,800	\$2,998,200	2%	
Willy-nilly	0.6	\$41,100	7.9	\$332,500	\$30,000	\$403,600	\$3,066,240	13%	
Wolfsam	0.5	\$18,200	0.7	\$13,300	\$1,000	\$32,500	\$837,200	5%	
Sub-total	3.9	\$274,200	37.3	\$1,789,100	\$534,200	\$2,597,500	\$32,612,655	8.0%	
Sub-total WOC (see below)	0.0	\$0	0.0	\$0	\$81,000	\$81,000	\$0		
Total	3.9	\$274,200	37.3	\$1,789,100	\$615,200	\$2,678,500	\$32,612,655	8.2%	

Alternate Operations

Devil Ray	0.62	\$43,100			\$6,000	\$49,100	\$3,914,000	1%	
Mac's Back	0.15	\$15,200	1.64	\$82,200	\$81,200	\$178,600	\$1,759,500	10%	
Mainly Sain						\$0	\$2,498,500	0%	
Mishmash	0.67	\$32,300	3.36	\$116,200		\$148,500	\$2,350,400	6%	
Rooster Cogburn	1.3	\$152,800	2.0	\$149,700	\$86,200	\$388,700	\$2,121,060	18%	
Rootless Rogers	0.9	\$72,000	0.57	\$17,100		\$89,100	\$2,854,500	3%	
Round Squared	0.1	\$3,100	1.9	\$37,700		\$40,800	\$1,400,000	3%	
Sunday Best	0.11	\$8,000				\$8,000	\$1,753,000	0%	
Total	3.8	\$326,500	9.4	\$402,900	\$173,400	\$902,800	\$18,650,960	5%	

Road Projects Not Associated with Harvest Operations in this AOP: None

Road Projects to be Completed as a Work Order Contract

Operation	Construction		Improvement		Other Projects	Total Project Costs	Funding Source	Comments
	Miles	Cost	Miles	Cost				
McGregor Basin Road Brushing 30 miles					\$39,000	\$39,000	FD	
Gate Installations		\$ -		\$ -	\$42,000	\$42,000	FD	Install 7 permanent gates to manage public use issues
Total	0.0	\$ -	0.0	\$ -	\$81,000	\$81,000		

REFORESTATION AND YOUNG STAND MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2020

Date: 11/09/2018

Projects Conducted by ODF Staff or Contractors	Board of Forestry			Common School Forest Lands			District	
	Acres Planned	Average Cost*/Acre	BOF Cost	Acres Planned	Average Cost*/Acre	CSL Cost	Total Acres	Total Cost
Seedling / Nursery Costs	1,455	\$194.00	\$282,270.00	35	\$194.00	\$6,790.00	1,490	\$289,060.00
Initial Planting	1,094	\$136.00	\$148,784.00	35	\$136.00	\$4,760.00	1,129	\$153,544.00
Interplanting	100	\$105.00	\$10,500.00			\$0.00	100	\$10,500.00
Underplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
*Tree Protection - Barriers	225	\$92.00	\$20,700.00			\$0.00	225	\$20,700.00
Tree Protection - Direct Control	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Chemical - Aerial	1,027	\$59.00	\$60,593.00	35	\$59.00	\$2,065.00	1,062	\$62,658.00
Site Prep - Chemical - Hand	118	\$120.00	\$14,160.00			\$0.00	118	\$14,160.00
Site Prep - Broadcast Burning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
*Site Prep - Piling Burning	750	\$5.00	\$3,750.00			\$0.00	750	\$3,750.00
Site Prep - Mechanical	230	\$160.00	\$36,800.00			\$0.00	230	\$36,800.00
Release - Chemical - Aerial	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release - Chemical - Hand	300	\$120.00	\$36,000.00			\$0.00	300	\$36,000.00
Release - Mechanical - Hand	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Precommercial Thinning	300	\$110.00	\$33,000.00			\$0.00	300	\$33,000.00
Pruning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Invasive Species	20	\$200.00	\$4,000.00			\$0.00	20	\$4,000.00
Road Side Spraying	200	\$200.00	\$40,000.00			\$0.00	200	\$40,000.00
Stocking Surveys	2,500	\$0.00	\$0.00			\$0.00	2,500	\$0.00
Phellinus Surveys	500	\$20.00	\$10,000.00			\$0.00	500	\$10,000.00
Totals	8,819	--	\$700,557.00	105	--	\$13,615.00	8,924	\$714,172.00

* Work to be completed by ODF staff; cost are for materials only

Projects Conducted by Inmates	Board of Forestry			Common School Forest Lands			District	
	Acres Planned	Average Cost*/Acre	BOF Cost	Acres Planned	Average Cost*/Acre	CSL Cost	Total Acres	Total Cost
Initial Planting	161	\$175.00	\$28,175.00			\$0.00	161	\$28,175.00
Interplanting	100	\$135.00	\$13,500.00			\$0.00	100	\$13,500.00
Underplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Tree Protection - Barriers	225	\$115.00	\$25,875.00			\$0.00	225	\$25,875.00
Tree Protection - Direct Control	800	\$81.00	\$64,800.00			\$0.00	800	\$64,800.00
Site Prep. - Chemical Aerial	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Chemical - Hand	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Broadcast Burning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Piling Burning	160	\$10.00	\$1,600.00			\$0.00	160	\$1,600.00
Site Prep - Mechanical	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release - Chemical - Hand	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release - Mechanical - Hand	350	\$92.00	\$32,200.00			\$0.00	350	\$32,200.00
Precommercial Thinning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Pruning	40	\$200.00	\$8,000.00			\$0.00	40	\$8,000.00
Invasive Species	20	\$225.00	\$4,500.00			\$0.00	20	\$4,500.00
Other			\$0.00			\$0.00	0	\$0.00
Totals	1,856	--	\$178,650.00	0	--	\$0.00	1,856	\$178,650.00

Grant Funded Activities	Board of Forestry			Common School Forest Lands			District		Funding
Project	Acres Planned	Average Cost*/Acre	Cost	Acres Planned	Average Cost*/Acre	Cost	Total Acres	Total Cost	
			\$0.00			\$0.00	0	\$0.00	
			\$0.00			\$0.00	0	\$0.00	
			\$0.00			\$0.00	0	\$0.00	
			\$0.00			\$0.00	0	\$0.00	

RECREATION SITE MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2020

Date : 02/13/2019

Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Campgrounds								
Stagecoach Horsecamp					\$ 1,000.00		\$ 1,000.00	Vault Service
Gales Creek Campground			\$ 3,331.00		\$ 8,000.00		\$ 11,331.00	Kiosk Roof (1000), CXT Clean-out Covers (2100), CXT door frames (231), Vaults (5000), Garbage (3000)
Reehers Camp			\$ 100,000.00		\$ 5,900.00		\$ 105,900.00	Power to host site & shelter (70,000), Kiosk Replacement (15,000), Fee Box Replacement (700), Vaults (4000), Garbage (1900). Possible SF fabrication of kiosk.
Browns Camp				\$ 8,958.50		\$ 18,000.00	\$ 26,958.50	Kiosk Roof (2000), CXT Clean-out Covers (3150), CXT door frames (808.50), CXT Paint (3000), Vaults (8000), Garbage (10000)
Elk Creek Campground			\$ 3,331.00		\$ 6,000.00		\$ 9,331.00	Kiosk Roof (1000), CXT Clean-out covers (2100), CXT door frames (231), Vault (3600), Portables (2400)
Designated Dispersed Campsites								
North Fork Wolf Creek Target Shooting Lane Improvement							\$ -	ODF partner Trash No Land is actively fundraising for the project
Little Browns Camp					\$ 1,000.00		\$ 1,000.00	Garbage Service (10 weeks)
Lyda Camp Portable Toilets						\$ 2,500.00	\$ 2,500.00	ATV Transfer, 5 months of service for two portables.
Day Use Areas								
See Campgrounds							\$ -	
Trailheads								
Kings Mountain			\$ 1,050.00		\$ 3,000.00		\$ 4,050.00	CXT Clean-out cover (1050), Vault service (3000)
Rogers Camp				\$ 750.00	\$ 1,800.00	\$ 1,800.00	\$ 4,350.00	CXT Paint (750), Vault service (3600), split ODF and ATV Transfer

Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Interpretive Sites								
Gales Creek Overlook							\$ -	
Sunset Rest Area							\$ -	
Other Operations								
Dumpsite Clean-up					\$ 2,500.00		\$ 2,500.00	
Volunteer Program					\$ 1,000.00		\$ 1,000.00	
Other Operations Expenses					\$ 55,000.00	\$ 5,000.00	\$ 60,000.00	Supplies and services for developed and dispersed facility operations - Well testing, county well reviews, well maintenance, fee envelopes, dust abatement, hazard tree removal, abandoned vehicle removal, tools and equipment, sign repair and replacement, invasive species and weed removal, general operations supplies, trail maps and brochures.
Trail Bridge Design Package Update					\$ 18,750.00	\$ 6,250.00	\$ 25,000.00	PSE Trail Bridge Design Package Update
District Total							\$ 211,662	
Other Total							\$ 43,259	
TOTAL							\$ 254,921	

RECREATION TRAIL MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year:

2020

Date : 02/13/2019

Project	Construction Projects			Improvement Projects			Operations & Maintenance Projects			Total Costs	Comments
	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)		
Non-Motorized											
Gales Creek Trail Seg C Reroute	1.00			1.00						\$ -	South Fork Crew Construction Project (16 - 20 days)
Excalibur Trail Construction Project	3.00									\$ -	Volunteer Project
Bridge Inspections (11)								\$ 7,700.00		\$ 7,700.00	Contractor (700/bridge)
Trail Maintenance							66.00			\$ -	South Fork Crew and Volunteers
Trail Signs										\$ -	South Fork Shop Fabrication
Motorized											
Elliott Creek Trail Bridge #3 Decking and Railing Replacement						\$ 7,000.00				\$ 7,000.00	OHV Team & South Fork (6 days)
Trail Maintenance							114.00			\$ -	OHV Team
Bridge Inspections (3)								\$ 2,100.00		\$ 2,100.00	Contractor (700/bridge)
Trail Signs								\$ 1,500.00		\$ 1,500.00	Contractor Fabrication
Rocky Uphill Trail				0.50						\$ -	OHV Team
										District Total	\$ 7,700.00
										Other Total	\$ 10,600.00
										TOTAL	\$ 18,300.00

District: Forest Grove

RECREATION GRANT MANAGEMENT SUMMARY
Fiscal Year: 2020

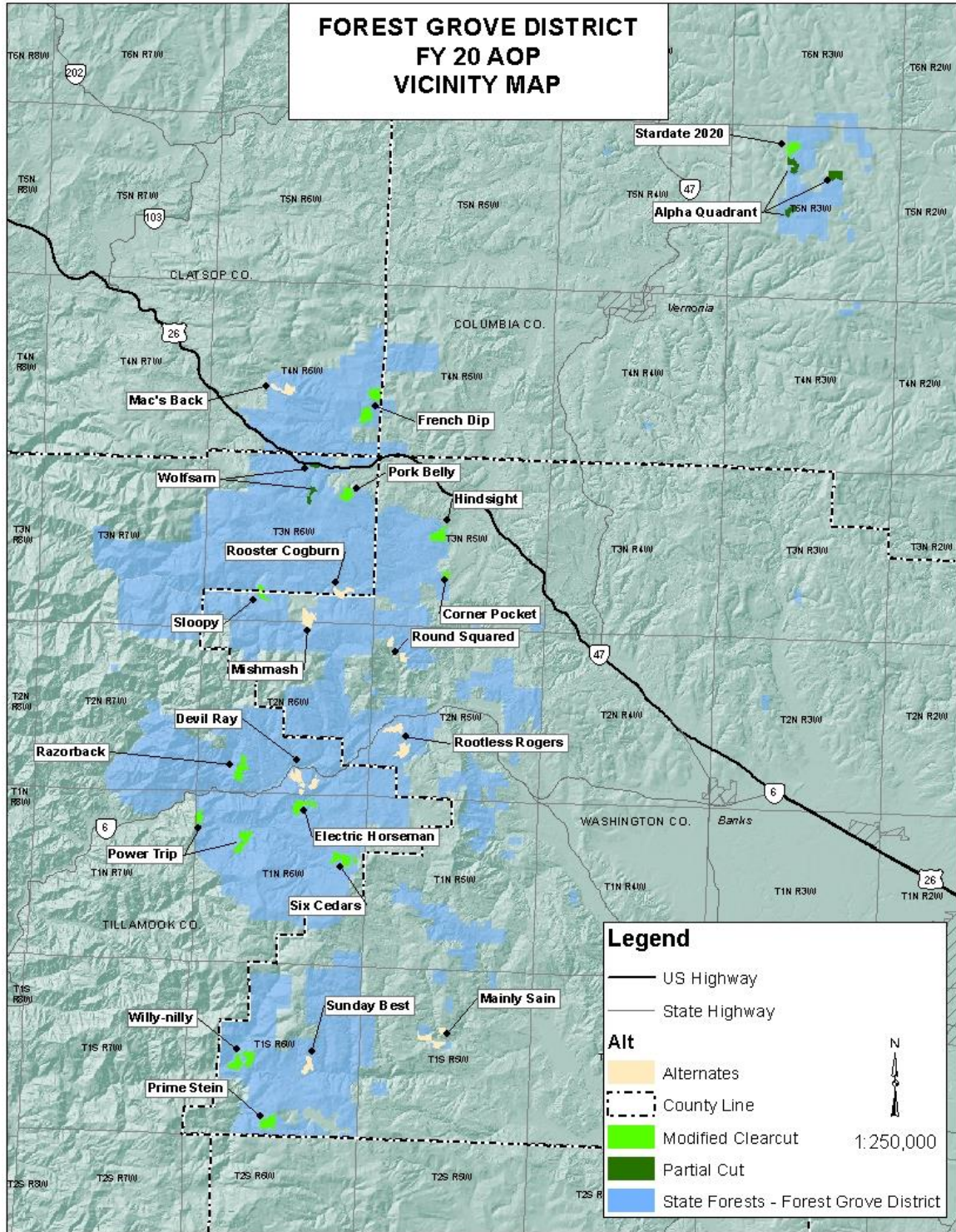
Date : 02/13/2019

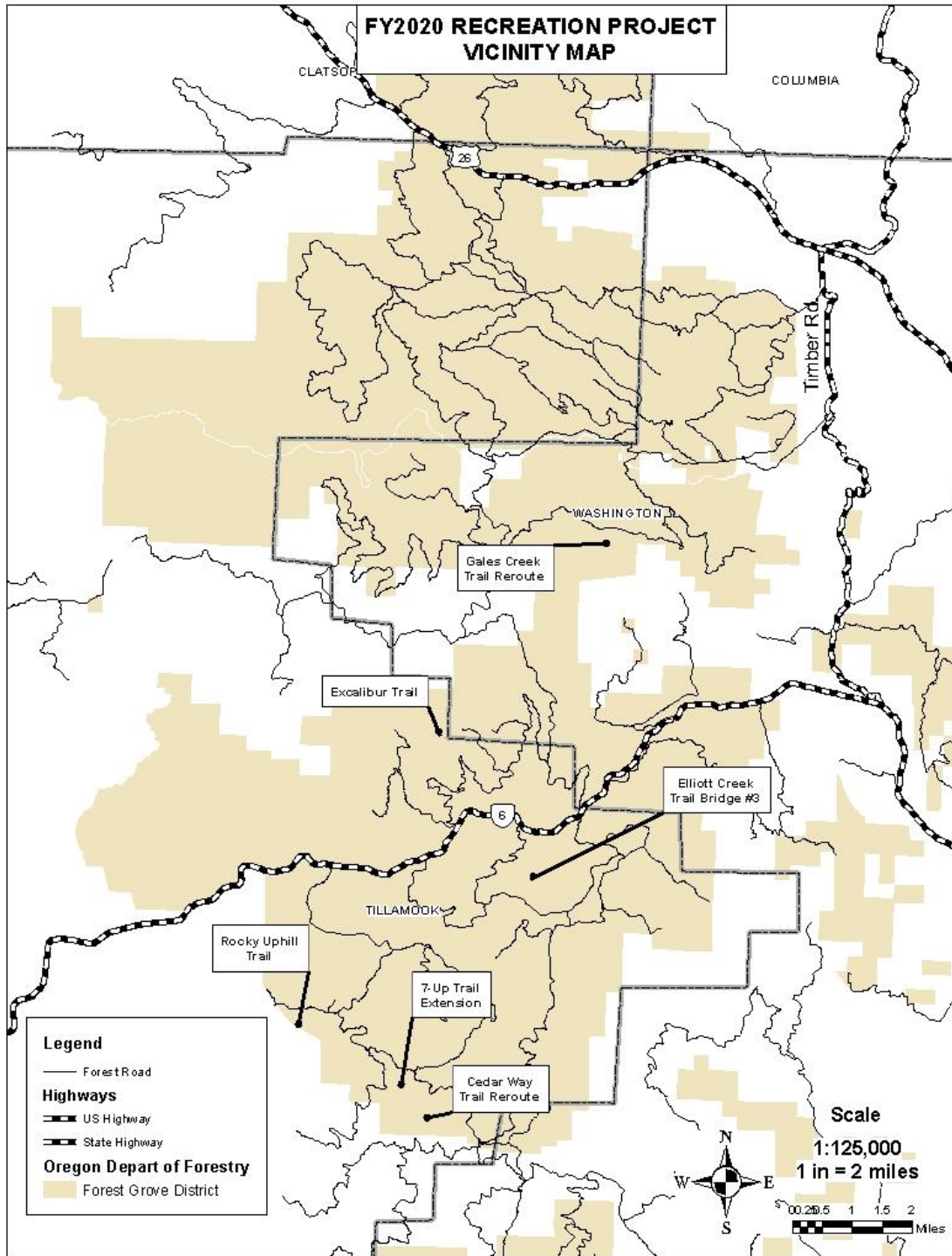
Grant	Status	Award Date (actual or anticipated)	Recreation Leadership Approval	Goals/Purpose	Funding		Project Total	Comments	
					Grant (\$)	Match (\$)			
ATV Grant	Planning to Apply	2019.07.01	Yes	Equipment Purchase - Replacement Trailers (2), Rock Hammer for Bobcat E32 excavator, Dump Bed for 2002 Morooka	\$ 42,560.00	\$ 10,640.00	\$ 53,200.00	ATV application due winter 2019. RTP application due spring 2019. The RTP grant would provide a portion of the match for the ATV grant (\$7840). ODF would provide \$2800 of the match.	
RTP Grant	Planning to Apply	2019.11.01	Yes	Equipment Purchase - Replacement Trailers (2)	\$ 7,840.00			The ATV grant would provide the match for the RTP grant.	
RTP Grant	Planning to Apply	2019.11.01	Yes	Kings Mountain Trailhead	\$ 110,000.00	\$ 165,000.00	\$ 275,000.00	RTP application due spring 2019. LWCF would provide \$137,500 of the match toward the RTP grant. ODF would provide \$27,500 of the match toward the RTP grant. ODF match \$\$ would be needed in FY2021. Project construction is expected to take place in FY21 / FY22.	
LWCF Grant	Planning to Apply	2020.07.01	Yes	Kings Mountain Trailhead	\$ 137,500.00			LWCF application due March 2020. RTP grant and ODF dollars would provide match (\$137,500) toward the LWCF grant. Project cost estimate is very rough. Project design is in progress and will provide a better project cost estimate in spring 2019 before we submit the RTP application.	
							\$ -	Total Project Costs = 328,200. Grant Funding = \$297,900. Total ODF Match = \$30,300. ODF match FY20 = \$2,800. ODF match FY21 \$27,500	
Grants Total								\$ 297,900.00	
Match Total								\$ 175,640.00	
TOTAL								\$ 473,540.00	

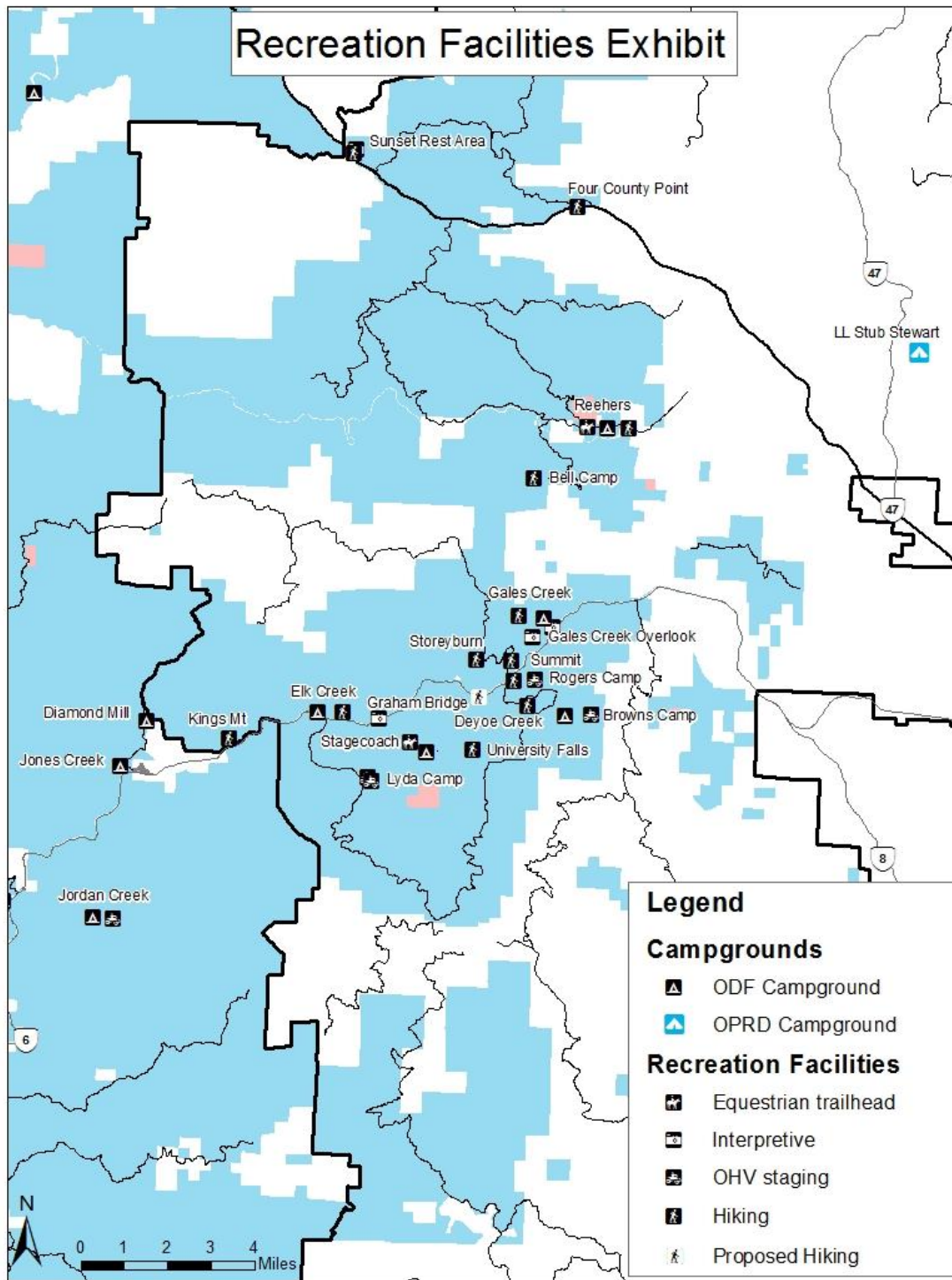
Appendix B

Vicinity Maps

- **Harvest Operations Vicinity Map**
- **Recreation Projects Vicinity Map**
- **Recreation Facilities Vicinity Map**







Appendix C

Consultations with Other State Agencies

Oregon Department of Fish and Wildlife (ODFW):

ODFW biologists attended a district field tour of the FY 20 AOP, a review meeting for resource specialists, and were provided the Summary and Pre-Operations Reports for review. The following are the written comments received:

General comments:

Stand Structural Components

Most of the sales do not have a narrative or table for prescriptions of stand structural components (green trees, snags, down wood). This makes it impossible to determine if or how standards in the Forest Management Plan (FMP) for these components will be met.

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. Green trees added to the RMT Retention Areas offer minimal value to wildlife unless protecting sensitive wildlife sites (e.g. nests) from wind-throw or edge effects.

As mentioned above, strategies for addressing snag standards in the FMP are not mentioned in the Pre-operation Reports. Most stands slated for clearcutting are dominated by larger diameter trees, and many are currently deficient in hard snags. To meet snag standards, ODFW recommends creating snags (topping is best method), rather than leaving extra GTs, and leaving them in a scattered or clumped distribution in upland portions of harvest units. If GTs are left in lieu of snag creation in stands with smaller diameter trees, they should also be scattered or clumped in the harvest unit.

Strategies for meeting down wood standards in the FMP are not mentioned in the Pre-operation Reports either. How will standards be met? Most stands with an MC prescription are of larger diameter and older age, so creation of down wood is recommended to address any deficiencies in those stands. If GTs are left in smaller diameter stands, in lieu of down wood creation, they should also be scattered or clumped in the harvest unit.

Roads

The dirt spurs in this AOP are slated for physical closure after use, which is beneficial to wildlife. Vehicle traffic on dirt roads can be a significant source of erosion and stream sedimentation. ODFW also 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.

“Oregon Department of Forestry Response” - Information on retaining stand structural components is described on page 10 in the Overview of Structural Components section.”

Oregon Department of Transportation – Archaeologists:

Archaeologists from the Oregon Department of Transportation (ODOT) have reviewed the proposed timber harvests, road construction and recreation projects for 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 operations that could have led to the presence of cultural artifacts today.

The following areas (listed by historic activity) have already been reviewed on the ground and determined that no cultural artifacts are present:

- Potential Old Military Trail: Rooster Cogburn

Appendix D

PUBLIC COMMENT PROCESS FOR THE FY 2020 ANNUAL OPERATIONS PLAN

The Oregon Department of Forestry issued a Press Release in March 2019, announcing a formal public comment period for the FY 2020 Annual Operations Plans from March 18 through May 2, 2019. The purpose of the Public Comment Period was to provide an opportunity for the public to review the AOP, 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.

The following changes have been made to the Forest Grove FY20 AOP since the Public Comment period:

- A field visit was conducted to Wolfsam with the ODF Aquatic Resource Specialist. It was determined that the medium non-fish stream in Unit 1 would benefit from thinning within the Inner Zone of the RMA. This added an additional 3 acres to the sale. The Pre-Operations Report, Summary Tables and Summary Document have been updated to reflect this change.
- A 10 acre modified clearcut unit was added to the Corner Pocket sale. It made sense to add this Unit operationally due to the small acreage in close proximity to Corner Pocket Unit 1 which is the same age and timber type and is coming out the same road system. This additional Unit was reviewed by ODF Resource Specialists prior to being included in the plan.

The District received 4 comments in support of gate installation especially in the Lousignont Creek area; 42 comments in support of the downhill Excalibur trail; 1 comment that would prefer a multi-use trail; 1 comment requesting a ban on all target shooting in the forest; 22 comments against the promotion of gravel bike riding; and 11 general comments with no specific information were received. Comments (*in italics*) and District responses are summarized below.

- *There were many comments in support of the Excalibur Trail, a gravity assist mountain bike trail. Many mentioned the history of the trail in the mountain bike community, the ability and excitement to support the trail, and the need for this type of trail in the greater Portland area.*

Based on the input from the public comments, and our goals to promote GPV, we will keep the Excalibur Trail in our annual operation plan as proposed and work to implement that effort over the coming year(s). Thank you for the offers to help with this project.

- *There were many comments in strong support and one comment asking about the effects of adding gates. The State Forest Advisory Committee discussed gates in the context of public lands and was supportive, while also suggesting that there are*

alternatives between locked gates and no gates. They encouraged judicious use as time and resources allowed. One suggestion included the idea of special days when the gates could be opened, such as youth hunter days. No comments were received in opposition.

Based on these comments and our efforts to promote GPV, we will install the gates as proposed. We will use the gates as tools to manage public use as planned, and retain the options to leave them open over time based on trying to balance the many forest goals, including safety and sanitation. Some of the undesired activity will likely shift to other areas, and staff will have to manage it there.

- *Comments from the equestrian community highlighted the concern that the proposed WCVA gravel road bicycle route also included the use of trails in the Reehers Camp area. Many of these trails have been developed with a focus on equestrian use. In addition, the public comment process did not highlight a special need for bike infrastructure at the Reehers Camp Day Use Area.*

Based on this response, we will modify the annual operation plan to support the following:

- Maintain the signage on existing infrastructure at Reehers Camp indicating bikes are welcome to use the Tillamook State Forest and encouraging practices to reduce conflict.
 - Add messaging to share information about the WCVA gravel road ride opportunities in the area.
 - Refrain from adding bike supportive infrastructure at this time.
 - Work with Washington County to support gravel routes that do not focus on the most important equestrian trails.
-
- *Some comments pertained specifically to target shooting, for both noise and safety reason.*

Target shooting has a long history of use on the Tillamook Forest and likely will into the future. ORS 166,170 limits the opportunity to develop rules to regulate target shooting on State Forest lands. Authority to regulate target shooting is solely vested in the Legislative Assembly. We have worked with user groups and specialists to reduce conflicts and enhance integration of target shooting with other uses, and continue to do so, as indicated by our proposal to add gates in specific areas and our closure of certain sites that do not align with other forest goals. ODF will continue to pursue ways to manage the forest that enhance Greatest Permanent Value, including work to mitigate target shooting conflicts.

- *One comment suggests Forest Grove review certain rock development costs and our mechanisms for creating snags for wildlife habitat.*

For both these items, the District periodically and continually assesses our processes and will continue to do so, especially regarding these suggestions.

Appendix E

Pre-Operations Report

Pre-Operations Reports are available from the District by request.

APPENDIX F

Forest Land Management Classification System (FLMCS) Modification Notification

No modifications are proposed with the FY2020 AOP.

Appendix G

Landscape Design – Forest Grove District Implementation Plan Minor Modification Notice

As described in the 2011 Forest Grove IP, the district has mapped a Landscape Design that designates 30% of the district acres in a future complex condition, either Layered (LYR) or Older Forest Structure (OFS). The term General management (GEN) or non-complex will be used to describe the desired future condition (DFC) of stands that are not planned for OFS or LYR in the Forest Grove District’s landscape design. The DFC landscape design for the Forest Grove district was done using a “broad brush” method incorporating a variety of landscape design principles and strategies. The original Landscape Design mapping process used stand types instead of geographical breaks to define the future complex stand boundaries with the intent that the boundaries could be fine-tuned during the planning process. Actual boundaries between complex and general DFC’s are determined on the ground during the sale planning and preparation process. Minor changes in the DFC landscape design may occur on an annual basis due to a variety of reasons. These reasons may include; refinement of the DFC boundary on the ground, forest health issues, and fitting a stand to a more appropriate or realistic pathway based on additional data collected through Stand Level Inventory (SLI) and field observations during the AOP planning process. Changes of up to 240 acres annually are considered minor changes and can be approved by the District Forest concurrent with the Annual Operation Planning process.

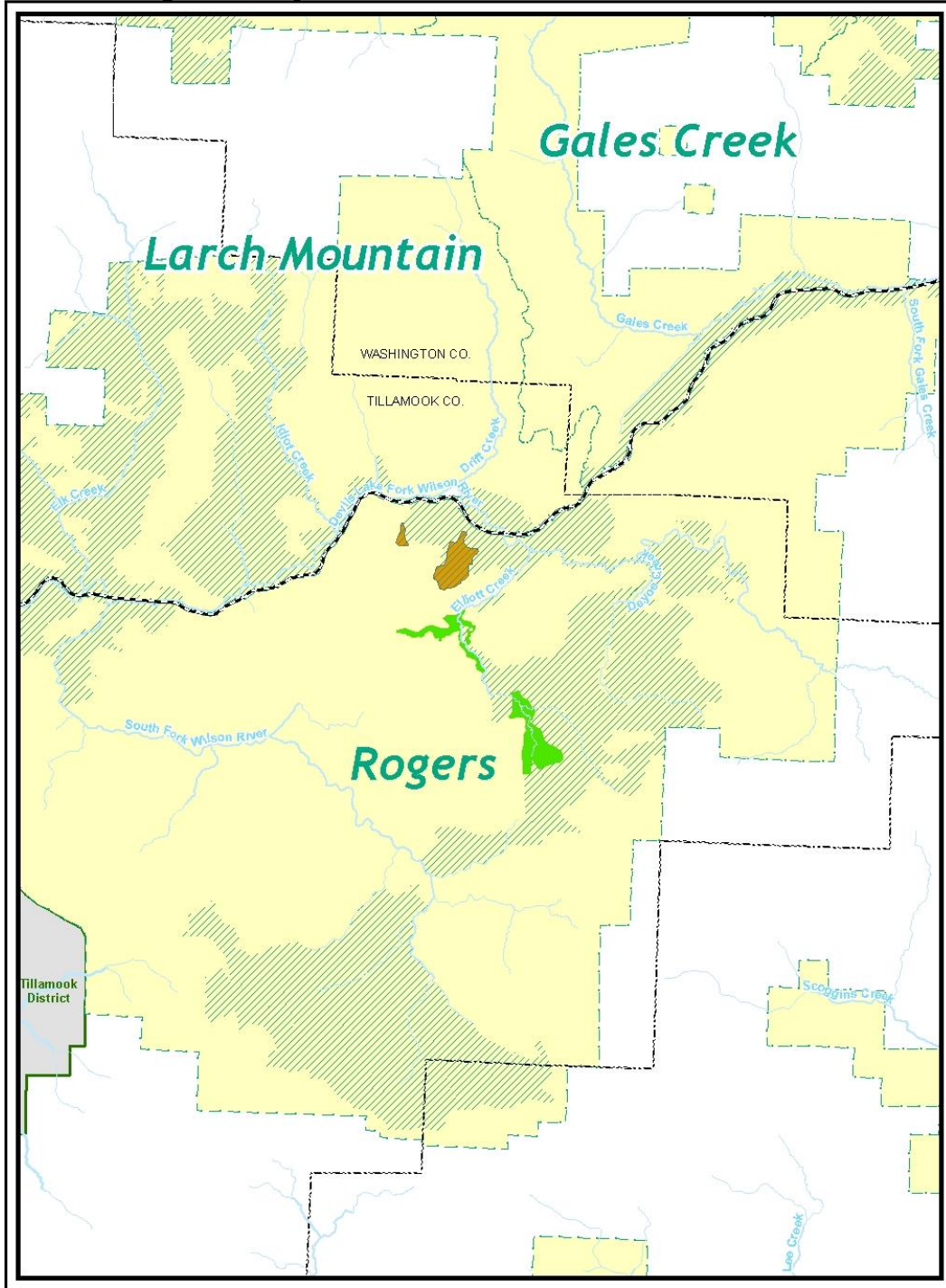
The district is proposing to change 7 acres that have a current DFC of Layered and 62 acres that have a current DFC of Older Forest Structure to non-complex or “general”. The 7 acre patch is being removed to create an operational timber sale boundary. The 62 acres of DFC OFS is currently included within a 152 acre SLI polygon which it does not share stand characteristics with and should have been typed out separately. With the exception of a 3 acre alder patch, this stand is a dense Douglas-fir stand with little chance of developing into a biologically complex stand. This area was reviewed in the field with various ODF & ODFW resource specialists.

The district chose 56 acres to move from a DFC of non-complex to Layered and 79 acres to move to Older Forest Structure. These replacement acres contain multiple tree species, are capable of becoming complex structure and are located along fish bearing streams. This new complex designation would expand upon areas that already have a DFC of complex structure and will also replace those acres of complex lost from the proposed DFC changes mentioned above. (See map below.)

These changes have been approved by the District Forester. The designation of DFC complex on the Forest Grove District remains at 30%.

Summary of Minor Landscape Design Modification			
Acres Removed		Acres Added	
Desired Future Condition	Acres	Desired Future Condition	Acres
LYR	7	LYR	56
OFS	62	OFS	79
Total Acres Removed	69	Total Acres Added	135

Forest Grove District Landscape Design - Desired Future Condition Revision



<ul style="list-style-type: none"> Highways Large Stream Medium Stream Current DFC Complex 	<ul style="list-style-type: none"> Change From DFC Non-Complex to Complex Change From DFC Complex to Non-Complex Management Basins Adjacent Districts 			<p>This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. The information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.</p> <p style="text-align: right;">JK1762019</p>
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