



Oregon

Kate Brown, Governor

Department of Forestry

Forest Grove District
801 Gales Creek Road
Forest Grove, OR 97116
(503) 357-2191
Fax (503) 357-4548

June 25, 2020



"SEWARDSHIP IN FORESTRY"

To: Andy White, Area Director
From: Mike Cafferata, Forest Grove District Forester

CC: Liz Dent, State Forests Division Chief
Ron Zilli, State Forests Deputy Division Chief
Colleen Kiser, State Forests Planning Manager

Re: Information Item – Approved Annual Operations Plan for FY 2021

The FY 2021 State Forests Annual Operations Plan (AOP) for the Forest Grove District has been completed. During my review of this plan, I have found that it conforms to the Oregon Forest Practices Act and is consistent with the 2010 Northwest Oregon State Forest Management Plan, the 2011 Forest Grove District Implementation Plan (IP), the 2021 Annual Operation Planning Standards and Guidance, and the FY 2021 State Forests budget instructions.

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

Also included in the AOP is a major revision to the District FY20 AOP. Appendix F summarizes the change made to the harvest operation Alpha Quadrant. The addition of a Unit to this harvest operation that has been reviewed by the ODF Resource Specialists and archeologists from ODOT can be approved by the District Forester concurrently with the next years AOP. The signing of this letter will approve these proposed changes.

Also included in the AOP is a minor modification of 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 by the District Forester concurrently with the AOP. The signing of this letter will approve these proposed changes.

As prepared, this AOP consists of 58.4 MMBF of harvest volume. This volume will be achieved through 382 acres of partial cut harvest and 1,276 acres of regeneration harvest. There are 13 primary operations and 3 alternate operations within this plan. The operations are estimated to generate gross revenues of approximately \$30,899,860 and net revenues of \$28,195,000 (\$11,879,582 in Tillamook County; \$14,338,760 in Washington County; and \$1,976,658 in Clatsop County). The FY21 AOP is the final year in the Forest Grove IP. In order to meet the Total AOP Volumes for the IP, the volume is slightly under the IP target of 61 MMBF. The Total AOP Planned Volume for the IP is 610MMBF, with the FY21 AOP volume of 58.4MMBF, the Total AOP Volume is 610.4MMBF.

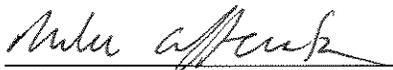
Reforestation and young stand management activities and investments are aligned with FMP objectives and budget considerations. Recreation facilities and trails are managed and maintained for safety, positive experiences and protecting other resources like water quality and are consistent with the FY 2021 budget level.

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 division staff level before implementation. The planned amount and location of all management activities are based on the latest site-specific assessments and estimates of operational, T&E surveys, and market variables. Management activity levels may be adjusted and modified to account for any significant changes to these variables. The alternate sales in this Annual Operations Plan may be used to replace the primary sales that cannot be completed as planned. Actual revenue realized from this AOP could change due to market fluctuations. Harvest operations and the associated project work provide an accurate picture of what will be designed and prepared for contract in FY 2021. Due to the time lag with contract duration, most of the actual harvest operations with associated revenues will not occur for a period of one to two years beyond the end of the fiscal year. Forest management activities such as reforestation and recreation projects will occur in FY 2021

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

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

Approved:



Mike Cafferata
Forest Grove District Forester

Forest Grove District 2021 ANNUAL OPERATIONS PLAN



FOREST GROVE DISTRICT

FY 2021 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 2021. 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 public forest has its challenges. In addition to the challenges of providing the opportunities described above, the forest is expected to be financially self-supporting. About two-thirds of the revenues from state forest timber sales go to local counties and other taxing districts, including schools. Oregon Department of Forestry (ODF) uses the remaining third of the revenue to manage the forests and keep them healthy, through activities including fire protection, tree planting, thinning, research and monitoring, recreation services, road maintenance and stream improvement. We are striving to continue to provide the current opportunities, and are considering a few opportunities for change.

Every year in the 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 the plan will undergo a 45-day public comment period.

This Annual Operations Plan (AOP) will be 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, 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 approximately 584,000 trees on 1,589 acres. Conducting vegetation management activities on 2,460 acres and animal management activities on an additional 1,705 acres to ensure the survival and growth of these plantations.
- Conducting surveys for northern spotted owls and marbled murrelets covering the majority of the district and surveying 10 miles of streams for the presence of fish habitat.
- Protecting streams and water resources through a series of buffers and seasonal restrictions.
- Habitat development projects such as creating snags by removing the tops, retaining green trees in clearcut areas, and leaving down wood, all for wildlife benefits in harvest areas and future forests.
- Maintaining 105 miles of road and improving approximately 15 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.
- Proposing to harvest approximately 58.4 million board feet of timber volume, through modified clearcuts, and partial cuts generating revenue of an estimated \$28.2 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
 - 14 trailhead facilities
 - 4 target shooting lanes

- 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. This work is forest wide on an ongoing basis, however, this year we will give specific attention to the Salmonberry Road and spur roads in the vicinity of the Natural Selection thinning unit.
- Improving, maintaining, managing, and patrolling the 117 miles of motorized and 66 miles of non-motorized trails, striving to protect the trail investments, provide for visitor safety, address developing trail issues, and protect water quality.
- Facilitating the important volunteer network that supports Recreation management through the following volunteer programs:
 - Camp Hosts
 - Adopt a Trail
 - Trail Patrol
 - Forest Clean-ups
 - Trail Maintenance and Construction Work Parties
- Facilitating the pre-planned 8 to 10 organized motorized trail use events and writing and administering 2 to 4 special use permits for motorized and non-motorized trail use events.
- Evaluating new event proposals for fit with Recreation program and forest management goals and objectives.
- Providing a firewood cutting program and miscellaneous forest products permits (salal, mushrooms, etc.) as done in 2020.
- Supporting ongoing research on the district, in partnership with research cooperatives and universities.

TABLES OF CONTENTS

Summary	3
INTRODUCTION	8
INTEGRATED FOREST MANAGEMENT OPERATIONS	9
Timber Harvest Operations	9
Overview of Timber Harvest Operations.....	9
Harvest Operations within Terrestrial Anchor Sites and Aquatic Anchors	11
Summary of Timber Harvest Operations by Basin	13
Forest Roads Management	18
Overview	18
Road Construction	19
Road Improvement.....	19
Road Access Management	19
Road Maintenance	19
Management of Rock Source/Supply	19
Land Surveying	20
Young Stand Management	20
Seedlings / Nurseries	20
Site Preparation	21
Planting	21
Tree Protection	22
Vegetation Management – Release Treatments	22
Pre-Commercial Thinning (PCT).....	23
Pruning.....	23
Stocking Surveys.....	23
Invasive Species	23

Roadside Vegetation Management.....	24
Recreation Management.....	24
Overview of Recreation Management	24
Facilities	24
Dispersed Use.....	24
OHV Trails.....	25
Non-motorized Trails.....	26
Volunteer Program and Partnerships.....	28
Event Management.....	28
Grants	28
Target Shooting.....	29
Unplanned Activities.....	29
Other Integrated Forest Management Projects.....	30
Aquatic & Riparian Management	30
Land Exchange	31
Law Enforcement and Public Safety	31
Firewood Cutting Program.....	31
Non-Timber Forest Products	31
Planning.....	32
Stand Level Inventory	32
Wildlife Surveys	32
Research and Monitoring.....	32
Recreation Program Planning	33
Other Planning Operations	33
Public Information and Education	33
Administration	33
APPENDICES	36

A. Summary Tables 37

B. Maps 49

C. Consultation with Other Agencies 53

D. Public Involvement 54

E. Pre-Operations Reports 56

F. Land Management Classification System 57

G. Landscape Design Minor Modification 64

INTRODUCTION

This annual operation plan (AOP) outlines state-owned forestland managed by the Forest Grove District for Fiscal Year 2021 (FY21), which begins July 1, 2020 and ends June 30, 2021. 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's 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 FY21, Appendix F describes any modifications to the Forest Land Management Classification System. Appendix G describes any modifications to the Forest Grove District Landscape Design. *

The proposed harvest operations and activities are planned to be designed, engineered, and submitted for processing during the FY21 time period. Actual on-the-ground operations will likely not occur during FY21 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 FY21.

A 45-day public comment period was held from March 23, 2020 through May 6, 2020. The District Forester has review all comments received before approving this plan.

As the Division works on implementing its new organization under Work Force Futuring, many of the positions are not filled yet so districts are understaffed and have several employees in new positions. Training at the district level will be occurring throughout FY21. This should improve over the course of this fiscal year and into the next.

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 District 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

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 planning manager, 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 is warranted. Written comments from the external resource specialists and the resolution of those comments can be found in Appendix C.

The FY21 AOP is estimated to produce 58.4 million board feet in volume, generate gross revenues of approximately \$30,899,860 and net revenues of \$28,195,000. The volume objective is slightly under 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.

Additional operations may produce timber volume for the district during the 2021 fiscal year but are not included in this AOP. These are small sales less than \$100,000 in value that affect small areas and produce little volume. These sales do not require significant effort to develop and execute and will comply with all policies and FMPs. Examples of these sales include salvage, pulp sales, removal of hazard trees, etc.

Refer to the attached Forest Grove District Financial Summary Table (Appendix A, Table A-1) and vicinity map (Appendix B) for more detail.

Table 1. Annual Operations Plan objectives compared to annual objectives identified in the Forest Grove District 2011 Implementation Plan. Harvest values are acres, Volume is in MMBF.

Annual Harvest Objectives	IP Annual Objective		2021 AOP
	Low	High	
Volume (MMBF)	61		58.4
Partial Cut Harvest	0	2,100	382
Regeneration Harvest	500	2,000	1,276

Table 1 shows the proposed acres by harvest type. The 1,276 acres of regeneration harvest planned for FY21 represents 1 percent of the district. All of the regeneration harvest acres will be designed as modified clearcuts. There are two partial cuts within older stands intended to

help move the stands towards or maintain 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 Objective¹
FY 12	61	59	60.8	-0.2
FY 13	61	63.5	63.1	1.9
FY 14	61	59	63.3	4.2
FY 15	61	56.7	64.9	8.1
FY 16	61	58.1	57.4	4.4
FY 17	61	56.1	55.5	-1.0
FY 18	61	65.5	68.2	6.2
FY 19	61	56.5	55	0.2
FY 20	61	61.5	63.8 ²	3.0
FY 21	61	61	58.4	0.4

1. IP Harvest Objective versus Sold Volume.

2. This number is a combination of sold sale volume and planned sale volume and will be updated as sales continue to be sold.

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 FY21 Annual Operations Plan. Structural components may be retained at higher levels in some units and at lower levels in other units. The intent is to achieve the targets outlined in the Forest Management Plan strategies in a given annual operations plan.

The green tree retention target for regeneration harvest units is an average of five trees per acre in the NW FMP. Green tree arrangements for this AOP may include; scattered individual trees, clumps of trees, and trees concentrated in and adjacent to riparian management areas, inner gorge areas or headwalls. 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. To promote diversity on the landscape a variety of green tree placement strategies will be used.

The NW FMP strategy for hard snags is to manage for at least two per acre on average across the landscape. The FMP strategy for Down Woody Debris is to retain an average of 600 to 900 cubic feet of hard conifer logs (class 1 & 2) per acre during regeneration harvest. Strategies for retaining snags and down wood are determined using a current condition assessment from forest inventory data or timber cruising data. The need for snag creation in each unit is evaluated based on cruise or inventory information that documents snags in decay class 1 and 2 in the sale and surrounding landscape. Areas with less than 2 hard snags per acre will be evaluated and an appropriate snag prescription will be developed as needed. Down Wood will

continue to be created through bucking practices, leaving felled snags in the unit and tops on ground yarding areas.

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 may only be required on planned sales in the Sunday Creek Basin, Wilark Basin, Scoggins Basin, and portions of Gales Creek and Roger's Basins.

Harvest Operations within Terrestrial Anchor Sites and Aquatic Anchors

The District 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 91 acres within the TAS proposed in the 2021 AOP and also shows the cumulative operations in TAS since the strategy was adopted (AOPs 2012 through 2021).

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

Acres within TAS	Current AOP (FY 2021)		Cumulative Harvest (Since FY 2012)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
AOP Acres	1,276	382	12,119	6,824
% of District Acres(115,000)	1%	0.4%	11%	6%
Terrestrial Anchor Site (TAS) Basin				
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%	12%
Wolf Creek (4,199 ac)	0	91	0	803
% of Acres	0%	2%	0%	19%
All TAS (9,377 ac)	0	91	0	1,168
% of Acres	0%	1%	0%	12%

Aquatic Anchors

The AAs became effective July 1, 2013 and replaced the Salmon Anchor Habitat Strategy that expired June 30, 2013. 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 shows the current harvest and the cumulative total from FY 2014.

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

Acreages	Current AOP (FY 2021)		Cumulative Harvest (since FY 2014)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
AOP Acres	1,276	382	9,956	4,006
% of District Acres (115,000)	1%	0.4%	9%	4%
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)	78	0	478	118
% of Acres	1%	0%	8%	2%
Elkhorn Creek (1,049 ac)	0	0	109	0
% of Acres	0%	0%	10%	0%
Lousignont Creek/Upper Nehalem River (12,355 ac)	206	0	1,912	1,218
% of Acres	1%	0%	15%	11%
S. Fork Salmonberry River (5,659 ac)	0	0	86	260
% of Acres	0%	0%	2%	5%
Upper Rock Creek (3,295 ac)	42	86	132	86
% of Acres	1%	3%	4%	3%
All Aquatic Anchors (30,900 ac)	326	86	2,717	1,682
% of Acres	<1%	<1%	9%	5%

Summary of Timber Harvest Operations by Basin

In the following section, the harvest operations planned for FY21 will be summarized in the context of the eleven management basins on the Forest Grove District. 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	2021 AOP	
	Partial Cut	Clearcut
Bell Mountain	0	0
Isolated Tracts	0	0
Gales Creek	0	126
Larch Mountain	0	0
McGregor	291	109
Rogers	0	373
Scoggins Creek	0	0
Sunday Creek	0	178
Upper Salmonberry	0	246
Wheeler	91	244
Wilark	0	0
Totals	382	1,276

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

Mountain Cat: This is an 81 acre modified clearcut of 80-year-old mixed stands of Douglas-fir, western hemlock and hardwood trees. The current condition of the operation is Layered (33 acres) and Understory (49 acres) and the Desired Future Condition (DFC) 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.

Transmission lines run through a small portion of the southwest corner of the operation and will require extra consideration during sale layout and harvesting.

A domestic water intake is located downstream of the sale. The fish stream this intake is located on is protected by a 115 foot no harvest buffer.

Round Squared: Approximately 44 acres of this operation is located within the Gales Creek Basin. The full description can be found under the “**Wheeler Basin**” heading further into this document.

Larch Mountain Basin

No harvest operation is planned for this basin.

McGregor Basin

Mac's Back: This is a 109 acre modified clearcut containing 70-76 year-old Douglas-fir stands mixed with western hemlock, western red cedar and some red alder. Approximately 88 acres of the sale have a current condition of Understory and the remaining 21 acres are Layered. The DFC 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.

A portion of this sale is located within the Upper Rock Creek Aquatic Anchor (AA).

Two short spur roads totaling 0.16 miles will be constructed to help facilitate the harvest. A little over 1.6 miles of road will be improved.

Sunset Music: This is a 291 acre moderate partial cut of 75-year-old Douglas-fir and western hemlock trees. The current stand condition of this operation is Understory (90 acres), Layered (182 acres) and Older Forest Structure (18 acres). The DFC for the entire sale is for Layered stands. The partial cut will target the removal of some of overstory Douglas-fir trees while retaining western hemlock and western red cedar trees. The prescription will maintain the complex structure of the Layered and OFS stands while continuing to move the Understory stands towards the pathway of complex stands. The 18 acre patch that is currently classified as OFS will be evaluated in the field by foresters and ODF biologists prior to sale layout to see if thinning is appropriate in that stand.

This sale is located within the Upper Rock Creek AA.

Approximately 2.5 miles of new roads will be constructed to facilitate the harvest. The district will be coordinating with the Oregon Department of Transportation as the new road construction ties into Highway 26.

Portions of this sale are within the scenic corridor of Highway 26. As a thinning, the visual impact should be minimal.

Underground transmission lines run along the southern portion of the sale and will require extra consideration during sale layout and harvesting.

Rogers Basin

Devil Ray: 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 Unit 1 are currently classified as Layered (61 acres) and Understory (49 acres), Unit 2 is classified as Understory (19 acres) and Unit 3 is Layered (60 acres). All three Units have a DFC of non-complex stands. 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 be constructed to help facilitate the harvest of this sale. Approximately 2.56 miles of road will be improved. Following the completion of harvest, 0.24 miles of road will be blocked.

A motorized trail runs along the boundary 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.

Units 2 & 3 of this sale are located within the Devils Lake Fork Wilson River Aquatic Anchor (AA).

Portions of Unit 1 and Unit 3 may be visible from Highway 6. This will be taken into account while determining green tree retention strategies.

Rootless Rogers: This is a two unit modified clearcut totaling 184 acres. The sale contains 65 to 70 year-old Douglas-fir trees. The stands within this sale are currently classified as Understory with a DFC of non-complex stands on 153 acres and of complex stands on 31 acres. The DFC of the complex stands are proposed to be changed to a DFC of non-complex stands due to extreme amount of the root disease *Phellinus weirii* in the area. Please see Appendix G for more information regarding these proposed changes. 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 1 mile of spur road will 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.

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.

Portions of Unit 1 are visible from Highway 6. This will be taken into account while determining green tree retention strategies, however, the visible portion is severely infected with *Phellinus weirii* so only immune or resistant trees will be considered for retention.

Will C (ALT): This is a three unit modified clearcut totaling 90 acres. The sale contains Douglas-fir, western hemlock and noble fir trees between 54 and 68-years old. The stands within the sale have a current condition of Understory with a DFC 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 0.43 miles of spur road will be constructed to help facilitate the harvest. Approximately 5.3 miles of road will be improved in conjunction with this sale.

Scoggins Creek Basin

Mainly Sain (ALT): This is a three unit modified clearcut totaling 142 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 DFC 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. Approximately a half mile of road will be vacated following the completion of harvest.

Sunday Creek Basin

Trask Flats: This is a two unit 178 acre modified clearcut containing 50-63 year-old Douglas-fir stands. The current stand condition for both units is classified as Understory. The DFC of the sale is for non-complex stands. Following the completion of harvest, both units will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Approximately 0.12 miles of spur road will be constructed to facilitate the harvest and .04 miles will be improved.

Upper Salmonberry Basin

Crazy Train: This is a 66 acre modified clearcut of 81-year-old Douglas-fir, western hemlock and noble fir trees. The current stand condition is Understory. The unit has a DFC 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.

No new road construction or road improvement is needed for this harvest.

Mishmash: 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 DFC of non-complex stands. The sale will be planted with a mixture of Douglas-fir and western hemlock seedlings following harvest.

A portion of this sale is located within the Lousignont Creek/ Upper Nehalem River AA.

Approximately 0.69 miles 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 0.05 mile spur road will be blocked and a 0.3 mile spur will be vacated.

Salmon Tail: This is an 82 acre modified clearcut of 74-82-year-old Douglas-fir, western hemlock and noble fir trees. The stands within this sale are currently classified as Understory with a DFC of non-complex stands and 3 acres of complex stands. These 3 acres are proposed to be changed to a DFC of non-complex to create logical operational boundaries. An additional 7 acres will also be changed to non-complex after consultation with the ODF biologist so as not to leave an area with no functional interior habitat. Please see Appendix G for more information regarding these proposed changes. 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 0.38 miles of new road will be constructed to facilitate the harvest with 1.84 miles of road to be improved.

Wheeler Basin

Daring Doty: This is an 82 acre modified clearcut. The mixed conifer stands within this sale are between 75 and 82-years-old. The current stand condition for the stands within this sale is Understory and the DFC 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.

This sale is located within the Lousignont Creek/ Upper Nehalem River AA.

No new roads are needed for this harvest. A little over 3 miles of road will be improved in conjunction with this sale.

Ingersoll PC (ALT): This is a 99 acre first entry partial cut of 33 year-old Douglas-fir trees. The current stand condition is Understory and the DFC is for non-complex stands.

No new road construction is expected for harvest.

This sale is located within the Lousignont Creek/ Upper Nehalem River AA.

Natural Selection: This is a 91 acre partial cut of 84 year-old mixed conifer stands. The current stand condition is Understory (67 acres) and Layered (23 acres). The DFC is for complex stands.

This sale is located within the Upper Rock Creek AA. This sale is also located within the Wolf Creek Terrestrial Anchor Site. This light partial cut will target the removal of some of the overstory Douglas-fir trees. Western hemlock, and western red cedar trees will be reserved from harvest. These species are typically found in the understory or are co-dominant trees within the stand. Reserving these species from harvest will maintain the current layering within the stand. In some areas no harvesting may occur and in other areas 10 to 15% of the overstory Douglas-fir trees may be removed. This prescription will continue these stands on a pathway towards achieving the DFC of Older Forest Structure (OFS). No additional management entries are anticipated.

No new road construction or road improvement are needed for this harvest.

There are two very active target-shooting sites in close proximity to this sale, both of which have safety, sanitation, and environmental issues. These two sites and the surrounding area will be evaluated as part of the timber sale activity in an effort to reduce the safety, sanitation, and environmental issues and replace them with opportunities for target shooting that are safe and sustainable.

Rooster Cogburn: 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 DFC 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.

This sale is located within the Lousignont Creek/ Upper Nehalem River AA.

Approximately 1.28 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: This is a two unit modified clearcut totaling 105 acres. The Douglas-fir stands within this sale are between 62 and 84 years-old. The majority of the stands within the sale are currently classified as Understory and have a DFC of non-complex stands with 9 acres classified as Layered targeted for complex stands. These 9 acres are proposed to be changed to a DFC of non-complex to create logical operational boundaries. Please see Appendix G for more information regarding these proposed changes. Following the completion of harvest, the sale will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

This sale is located within the Lousignont Creek/ Upper Nehalem River AA.

A small 0.07 mile spur road will be constructed to facilitate the harvest. Almost 2 miles of road will be improved.

Wilark Basin

No harvest operation is planned for this basin.

Forest Roads Management

Overview

The State Forest road network provides access for forest management activities, fire suppression, and recreation. Visions, guiding principles, and goals for managing the 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.

Almost all of the roadwork in this AOP is related to constructing spur roads and for improving haul routes for the FY21 timber sales. This section describes the types of road management activities that will occur in FY21 and the attached Forest Roads Summary Table (Appendix A, Table A-3) describes the anticipated total amounts.

Road Construction

Road construction and improvement identified in this plan will be primarily achieved through project work connected with timber sales. New LiDAR based slope information is helpful in locating roads away from locally steep slopes.

Road Improvement

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

Road Access Management

Access to the State Forest is generally not restricted. However, roads that pose a high risk of damage to water quality are candidates for closure. Closing and vacating roads reduces the district's maintenance cost and helps to minimize impacts to the environment from roads. We retain the option of closing roads if vandalism, neighbor concerns, or excessive road damage from public use becomes a problem in particular areas. The public may still access these areas on foot, bicycle or horseback.

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, using the State Forest road crew or work order contracts. Maintenance is focused on ensuring proper drainage to prevent sediment entering streams. 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

The District provides durable rock for in-sale spurs and haul routes, which allows for year-round harvest opportunities. Rock quarry development, rock crushing, and/or purchasing

rock is necessary to provide sufficient quantities of the road rock for planned road construction, road improvement, and road maintenance activities.

Quarry developments are planned for the following operations; however, these plans are subject to change as timber sale project work is laid out:

- Crazy Train, Daring Doty, Mishmash, Rooster Cogburn, Rootless Rogers, Salmon Tail, Sunset Music

Annually, the District requires between 2,000 to 4,000 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 FY21.

Land Surveying

Every year surveying needs are analyzed and planned to be kept at a minimum level while ensuring property lines and corners are clearly marked. Survey work may be accomplished through service contracts with licensed professional land surveyors, cost sharing with adjacent landowners or utilizing the licensed surveyor on staff with ODF. Land surveying may be necessary on the following sales:

- No surveys are needed.

Young Stand Management

The State Forest strategy is to use a range of 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 District Implementation Plan. These tools include site preparation, planting, tree protection, vegetation management, pre-commercial thinning, early 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 of reforestation and young stand management activities that will occur in FY21 and the attached Young Stand Management Table (Appendix A, Table A-4) describes the anticipated total amounts. 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 2020 growing season.

Reforestation activities will be completed by using experienced contractors. A portion of the activities will be completed by utilizing crews from South Fork Camp. These crews work on activities such as tree protection, mechanical hand release, and noxious weed control.

The reorganization of the State Forest Districts leveling the workforce between districts created an opportunity for Forest Grove to take on an additional workload. The Forest Grove reforestation staff will be assisting with the management of 1,250 acres in the Tillamook District.
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. A wide variety of seedlings are grown at forest nurseries throughout the Pacific Northwest to meet the reforestation needs. Seedlings are grown in three different stock types: 1) plug seedlings or one-year-old container grown seedlings, 2) plug ones which are grown one year in a container followed by a second year in a bare root bed, and 3) straight bare root seedlings grown from seed in a bare root bed and then transplanted to a lower stocking bare root bed. The budget accounts for a string of growing costs over several years rather than just those costs of the trees being grown and planted in the winter. The budget for seedlings includes portions of the costs for growing seedlings for three planting years. Additionally, there are costs associated with the seed that is used for growing the seedlings, estimated transportation costs and various costs associated with packaging and freezer and/or cooler storage. The individual species mixture and stock type used for a particular reforestation unit is determined after the final inventory from the forest nursery and varies by District.

Site Preparation

Site preparation is any planned measure to prepare a site to allow for favorable growing conditions for newly planted seedlings. More than one of these techniques may be used for any given site based on the attributes and reforestation prescription for the site. The three main site preparation techniques are mechanical, chemical and slash burning.

- 1) Slash Burning: Slash burning can be accomplished by broadcast burning the entire unit or burning piles that result from mechanical site preparation.
- 2) Mechanical: Mechanical site preparation is the use of mechanized equipment to rearrange or alter forest slash and/or disturb the forest surface layer and vegetation to create seedbeds or planting spots. Planting spots are created in a fairly even distribution. Dense slash concentrations created during timber harvest may be mechanically piled as part of the timber sale contract.
- 3) Chemical: Chemical site preparation involves the application of herbicides to control competing vegetation before planting or natural regeneration and during the early stages of seedling establishment. Applications occur by two primary methods: aerially by helicopter or ground based with the use of backpack application equipment. The objective is to control brush species to allow stand establishment and maintain 2-3 years free of significant competing vegetation. The actual site preparation plan will be prepared in late spring when harvest unit availability and brush development is better known.

Planting

Tree planting operations are conducted for various reasons. These include meeting Forest Practices Laws, quickly establishing a new stand of trees after timber harvesting, and increasing species diversity in the area and across the landscape. Planting is comprised of matching the appropriate species and stock type to the planting site. Forest health strategies are addressed on a site specific basis when the planting plan is developed. Site specific prescriptions consider target species, aspect, elevation, soil types, Swiss Needle Cast risk where applicable, *Phellinus weirii* (laminated root rot) presence, required stocking guidelines, natural advanced regeneration, and the desired future condition of the stand. To accomplish this, a mixture of species is planted to provide for a healthy,

productive, and sustainable forest ecosystem over time. The following are different types of planting.

- 1) Initial Planting (Regeneration harvest units): Planting activities establish the desired species and stocking levels to meet the goals in the Forest Management Plan and Forest Practices Laws. Planted seedlings will be well suited and adapted to the reforestation site and where appropriate, a mixture of species may be planted to increase diversity on the landscape.
- 2) Interplanting: Interplanting may occur when stocking levels fall below or are at risk of falling below FPA minimums. In certain instances, interplanting will occur to increase stocking on high quality sites to fully capture the site. In other areas, lower stocking will be acceptable, as it will provide high quality early seral habitat while still meeting FPA requirements.
- 3) Underplanting: This type of planting is occasionally conducted after thinning in order to introduce both species diversity and an additional future layer of structure into a stand.
- 4) Natural Regeneration: Units or portions of units are assessed prior to planting. Natural regeneration is considered primarily in western hemlock stands that have been salvaged from wind storms, where small gaps and holes less than 2 acres have been created in partial cut units, and in unit rock outcrops or cliffs. Natural regeneration of red alder and other minor species is used to provide diversity in all harvest units.

Tree Protection

Animal damage on newly planted seedlings reduces their overall size, health and vigor. Extensive damage can lead to interplanting, may extend the time to achieve free to grow status as defined by the Forest Practices Act and prevent meeting Forest Management Plan goals. Deer and elk, as well as mountain beaver, can heavily damage young seedlings. 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 (bud caps, vexar tubes, etc.) help prevent damage from big game. Direct control includes trapping mountain beaver in highly populated areas prior to planting helps prevent damage to newly planted trees.

Vegetation Management – Release Treatments

Vegetation management is done to reduce light, moisture or nutrient competition from undesirable vegetation in a young stand of trees to improve survival and growth. It can also be used to alter tree species composition under pressure from insect and disease and favor species that are tolerant or resistant to the threat. Vegetation management may be required to meet forest practices reforestation stocking requirements, the NW Oregon State Forests Management Plan and the District Implementation Plans. There are two types of vegetation management, chemical and manual release treatments. They are described below.

Chemical Release: Chemical release treatments involve the application of herbicides to control undesirable vegetation. Typical application methods are broadcast, directed spray, and hack and squirt. Broadcast application treatments are sprayed over the top of seedlings and undesirable vegetation using either aerial or backpack methods. Directed spray applications are made with a backpack and target individual plants. This method is often used to remove invasive species such as Scotch broom from young stands. Hack and squirt involves basal or

stem injection of chemicals. This method is typically applied to hardwoods as a way to release conifers from hardwood competition.

Manual Release: Manual release can include cutting down of noxious weeds or hardwoods. Hardwood release is used when ingrowth of hardwoods, mainly red alder in the northwest and madrone and tanoak in the southwest, threaten to change the stand from conifer dominated to hardwood dominated. In this treatment, hardwoods are removed using chainsaws leaving all of the conifer trees. This differs from PCT (described below) in the fact that conifer spacing and species are not manipulated. While hardwoods are important on the landscape, long-term conifer production is the goal for many stands across the district.

Pre-Commercial Thinning (PCT)

PCT is a silviculture activity used to manipulate the density, structure or species composition of overstocked young forest stands. Generally, the purpose of a PCT operation is to release the biggest and best growing trees so they can maintain their growth. PCT is normally conducted in a stand between the ages of 10 and 20 years old. In areas of disease such as Swiss Needle Cast or *Phellinus weirii*, PCT can be used to favor species other than impacted Douglas-fir trees in the residual stand.

Pruning

No pruning activities are planned for this AOP beyond western white pine for disease prevention of blister rust. Approximately 40 acres are anticipated. This work will be accomplished by utilizing South Fork Camp crews.

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.

Invasive Species

Most noxious weeds or invasive plants are found along roads and have spread into plantations. The main sources for the weed introduction into the forest are vehicle tires, equipment moved into and out of district, and where soil disturbance occurs. 100% weed-free grass seed and certified weed-free straw used for mulch is required for project work on roads. Equipment washing is required in timber sale contracts to prevent the introduction of weed seed from other sites. It is also required that weed-free hay is used for feeding stock on State Forest Lands.

Reforestation continues to work with Marketing, Forest Roads, and Recreation personnel 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.

Roadside Vegetation Management

Reforestation works with the Forest Roads personnel 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 vegetation will be controlled manually, mechanically or chemically where necessary. The method used will depend on the characteristics of the vegetation and its location. During the spring of 2020, roadside vegetation surveys will be conducted to determine roadside chemical treatment needs for FY21. The project will be done by utilizing experienced contractors.

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 70 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 (2010), 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. See Tables A-5, A-6 and A-7 in Appendix A for more information.

Facilities

The Recreation program plans to operate and maintain the following developed facilities on the Forest Grove Districts:

- 5 campgrounds
- 2 day use picnic areas
- 2 highway wayside interpretive sites
- 14 trailhead facilities
- 4 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. They will be managed to minimize user conflict and to avoid adversely impacting the resource. The operating season for developed campground facilities will remain consistent with the FY20 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 2021 and will require varying degrees of Recreation program and 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 FY21.

Table 6. Developed and Dispersed Facility Projects

Project Type	Project Name	Work Resources	Project Description
Facility Development	Kings Mountain Trailhead Expansion	Recreation staff / South Fork / Contractors	Project work will involve construction of the Kings Mountain Trailhead expansion project as represented in the design plans.
Facility Development	Fear and Loaming Trailhead	Recreation staff / Road Crew / South Fork	Project work will involve construction of the Fear and Loaming Trailhead. This trailhead is being constructed to support use of the Fear and Loaming gravity mountain bike trail.
Facility Development	Drift Creek Trailhead	Recreation staff / Road Crew / South Fork / Contractor	Project work will involve planning, design, and construction of the Drift Creek Trailhead. This trailhead is being constructed to support use of the Fear and Loaming gravity mountain bike trail and the future segment of the Wilson River Trail.
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.

OHV Trails

The Recreation program will continue to place emphasis on maintenance and upgrade of existing trails. Project work will continue to focus 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 FY20 is expected to extend into FY21. Overall OHV program priorities are transitioning from the Browns Camp OHV area to the Diamond Mill, Jordan Creek, Trask, and Nicolai OHV areas. FY21 OHV trail projects on the Forest Grove District are identified and briefly described in Table 7 below.

Table 7. OHV Trail Projects

Project Type	Project Name	Project Mileage	Work Resources	Project Description
Trail System Planning	Tillamook State Forest and Clatsop State Forest OHV Trail System Plan Development	NA	Recreation Program Staff / OHV Community / Resource Specialists.	Project deliverable will be an updated OHV trail system plans for the Tillamook and Clatsop State Forests.
Trail Construction	Trestle Trail	2.5 miles	District Staff / ODF Equipment Operators / Volunteers / Resource Specialists	This project will involve integration planning, trail location and design, and construction of the Trestle Trail. This project addresses user safety, conflict, trail system diversity, and trail system connectivity issues.
Trail Construction	7-Up Trail #17	1 mile	District Staff / ODF Equipment Operators / Volunteers /Resource Specialists	This project will involve construction work to extend 7-Up Trail to Hogsback Trail. This project addresses user safety, user 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 on the Forest Grove District.

Non-motorized Trails

The Recreation program will continue to place emphasis on making improvements to the existing non-motorized trails on the Forest Grove District in an effort to address user safety, resource protection, investment protection, sustainability, and user accommodation issues and to reduce maintenance need. Due to trail and facility maintenance needs and South Fork and Recreation staff capacity, some project work from FY20 is expected to extend into FY21. FY21 non-motorized trail projects on the Forest Grove District 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 Development (Planning)	Wilson River Trail Segment D	3.5 miles	Contractor / Recreation Staff / Volunteers	This project will involve the completion of the location and design work for a 3.5 miles segment of the planned Wilson River Trail. Project dependent on grant funding.
Trail Improvement	Nels Rogers Trail Reroute	0.5 miles	Volunteers / Recreation Staff / South Fork	This project would involve construction of a 0.5 mile reroute. This project addresses user safety, conflict, and trail system connectivity issues.
Bridge Replacement	Storey Burn Trail Bridge #1	NA	Recreation Staff / South Fork	Work will involve coordination with ODOT staff and our State Forest Division engineer to assess the current situation and to develop and implement a bridge replacement plan that could involve development of a 15 to 20 foot long glu-lam stringer bridge or placement of culvert infrastructure. This project addresses user safety, user accommodation, trail system sustainability and resource protection issues.
Bridge Replacement	Wilson River Wagon Road Trail Bridge 5 Replacement	NA	Recreation Staff / South Fork	Work will involve coordination with our State Forest Division engineer to assess the current situation and to develop and implement a bridge replacement plan that could involve development of a 40 foot long glu-lam stringer bridge or a 40 to 50 foot long turnpike. This project addresses user safety, user accommodation, trail system sustainability and resource protection issues.
Trail Sign Fabrication	Non-motorized Trail Signs	NA	Recreation Staff / South Fork	This project will involve fabrication of trail signs for the non-motorize trail network. Signs are being developed to replace damaged and aging signs and to address trail mileage changes resulting from recent additions to, and reroutes of, the trail system.
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 the Recreation programs 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 Recreation program expects to complete condition assessments and trail clearing maintenance on all trails on the Forest Grove District (117 miles OHV and 66 miles non-motorized). Trail user safety, investment protection, and resource protection maintenance will be completed as needed. Other basic trail maintenance work is completed on most trails every two or three years. Approximately 30% to 40% of the network on the Forest Grove District will receive basic trail maintenance attention in FY 2021.

Volunteer Program and Partnerships

The recruitment and use of volunteers is critical to the overall success of the Recreation program. The Recreation program 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

In FY21, 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 program anticipates facilitating between 5,000 and 6,000 hours of volunteer contribution on the Forest Grove District in FY21.

The Recreation program 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 Recreation program permits organized sponsored OHV trail use events on state forest land. The OHV events consist of poker runs (fun runs), competitive timed motorcycle races, trials motorcycle competitions, four-wheel drive rallies, and competitive four-wheel drive runs. Non-motorized trail use events consist of equestrian poker rides, mountain bike races, forest road bicycle rides, running races, and archery events. These types of events are permitted less frequently. Non-motorized event requests will be evaluated to determine if the program has the capacity to support proposed event activities.

In FY21 the Recreation program expects to review, permit, and administer 8 to 10 motorized trail use events and 2 to 4 non-motorized trail use events on the Tillamook State Forest. Motorized events for FY21 were scheduled at a meeting in October 2019. There are no plans to pre-schedule FY21 non-motorized events.

Grants

The Recreation program expects to apply for and administer several grants in FY21 to support project and program activity.

The program will be applying for and administering the following grants to support the construction phase of the Kings Mountain Trailhead Expansion project.

- Land and Water Conservation Fund (Administration)

- Recreation Trails Program Grant (Administration)
- Tillamook County Transient Lodging Tax Grant (Administration)

The program will be applying for and administering the following grant to support the Wilson River Trail Segment D location and design project.

- International Mountain Biking Association Trail Accelerator Grant (Administration)

In partnership with our partners in the target shooting community, the Recreation program will be administering the following grant to support improvement of the North Fork Wolf Creek Target Shooting Lanes.

- Oregon Department of Fish and Wildlife Shooting Range Grant Program

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

Target Shooting

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

- Resolving the safety, sanitation, and environmental issues.
- Reducing the fire potential associated with target shooting.
- Developing public ownership and involvement in the development and implementation of the strategy.
- Maintaining safe and sustainable opportunities for recreational target shooting on the TSF.

In FY21, planning and 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 and the Recreation program often receive 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 & Riparian Management

All fish bearing streams found in State Forests 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. Aquatic Anchors (AA) have been established on watersheds in the District in which additional aquatic conservation measures are applied when regeneration harvesting. Small, perennial, non-fish bearing streams will be protected with 50 foot no harvest buffers and all fish bearing streams and large and medium non-fish bearing streams will be protected with 100 foot no harvest buffers as per AA Species of Concern strategies.

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.

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

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. Many streams in the past have been surveyed with electro-fishing techniques that established the upper extent of fish use. However, many small streams have not yet been surveyed for fish presence. Streams needing classification 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.

Restoration Goals and Identification Process: The overarching principles for fish habitat restoration are described in the Forest Management Plan. There are stream enhancement opportunities identified in association with some sales in this AOP. Before determining if these potential projects will go into a full planning process, more field review is needed. The ODF Aquatic and Riparian Specialist and ODFW District Fish Biologists will perform field evaluations to make sure that the streams will benefit from the proposed projects.

Potential Stream Projects may be associated with the following Timber Sales:

- Daring Doty
- Rooster Cogburn

- Salmon Tail
- Trask Flats

Other Planned Projects to improve aquatic areas within the FY21 AOP:

- The replacement or vacating of one barrier to fish on Pit Road. District personnel will work with Resource Specialists to determine long-term road needs for the area.
- 17 miles of road improvement including installing disconnect culverts and additional cross drain culverts and to add mitigation where applicable to hydrologically disconnect the roads from streams as possible. Hydrologic connectivity of the haul routes for the FY21 AOP is measured at 16.2%, it is estimated the percent connected will be reduced to 14.5% thru road improvements and mitigation.

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 Department 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. Recreation Program staff work in partnership with the forest deputies, the TCSO, and the District staff to facilitate the law enforcement activity 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 the forest deputies, fire protection staff, and recreation staff. The forest deputies are essential to the success and overall management of the forest and their presence benefits all forest users.

Recreation program staff also work closely with the Washington County Sheriff’s Office (WCSO) 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 primary objective of the District Firewood Cutting Program is to provide a source of firewood from Sate Forests to the public for personal use. The permit fee for personal firewood cutting is \$20 for two cords. Permits are issued for a period of three weeks. Historically firewood cutting has only been allowed outside the months of fire season.

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.

Planning

Below are the significant district-level planning projects currently scheduled for commencement, completion, or both in FY21.

Stand Level Inventory

No SLI data acquisition is planned for this AOP.

Wildlife Surveys

Northern Spotted Owl Surveys

For the FY21 AOP, the District will continue the northern spotted owl (NSO) survey program, in order to 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.

Marbled Murrelet Surveys

In FY21, 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.

T&E Plants

The District will continue to screen harvest operations against the Oregon Biodiversity Information Center (Orbic) database and other known locations on the District to identify potential conflicts with plant species listed in the District IP.

Species of Concern Wildlife

The District will continue to screen harvest operations against several wildlife databases to identify potential conflicts with wildlife of concern listed in the District IP.

Research and Monitoring

The Forest Grove District will assist in a variety of research and monitoring projects in FY21. 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 FY21, staff from the Recreation program will be participating in broader planning work for the Recreation, Education, and Interpretation program. Recreation program staff will also be supporting the State Forest Divisions forest management plan work, district AOP development and implementation work associated with other district programs.

Other Planning Operations

During FY 2021, the District will continue to conduct Hydrological Connectivity Surveys on the road systems as time allows. In conjunction with the REI Team, the District will provide input and context to recreation planning. The district will also continue to participate in FMP and HCP reviews as needed.

Public Information and Education

Public Information and Involvement

Public information and involvement activities will include:

- Review and input regarding the FY22 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.
- OHV Trail System Plan Development.
- Recreation project planning and design.
- Outreach to underserved or underrepresented groups.
- Marketing of the State Forest Recreation Fund.

Public Education

Recreation program staff will be 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). Public Education activities will include:

- Maintenance of the Tillamook State Forest web page, the Tillamook State Forest Blog, and recreation information phone line.
- Development, management, and maintenance of recreation facility and forest information board messaging.
- Update of Recreation program brochures.
- Development of the Tillamook State Forest Visitor Map.
- Review and support of responsible target shooting messaging on social media prepared and managed by our partners in the recreational target shooting community.
- Ongoing updates for the Tillamook State Forest OHV Trail Map.

Administration

During FY21 the district will be transitioning to a new organization. There will be 18 permanent positions whose full-time function is to manage State Forest land on the District and 4 permanent positions who work part-time on management of State Forest land. In addition, the District will be supported by the NWOA REI Team and the NWOA Operations Team as well as

the Division Planning and Coordination Team. All are responsible for implementing the FY21 Annual Operations Plan. The district positions are divided into 4 functional groups: Forest Management, Forest Roads, Reforestation, and Administration. See the attached organizational chart.

There is a Marketing Unit which responsible for all aspects of timber marketing. These activities include participating in the planning process, unit layout, assisting with road layout and design, timber cruising, timber sale appraisal, contract writing, contract administration, and coordinating with the REI, Planning, and Operations Teams.

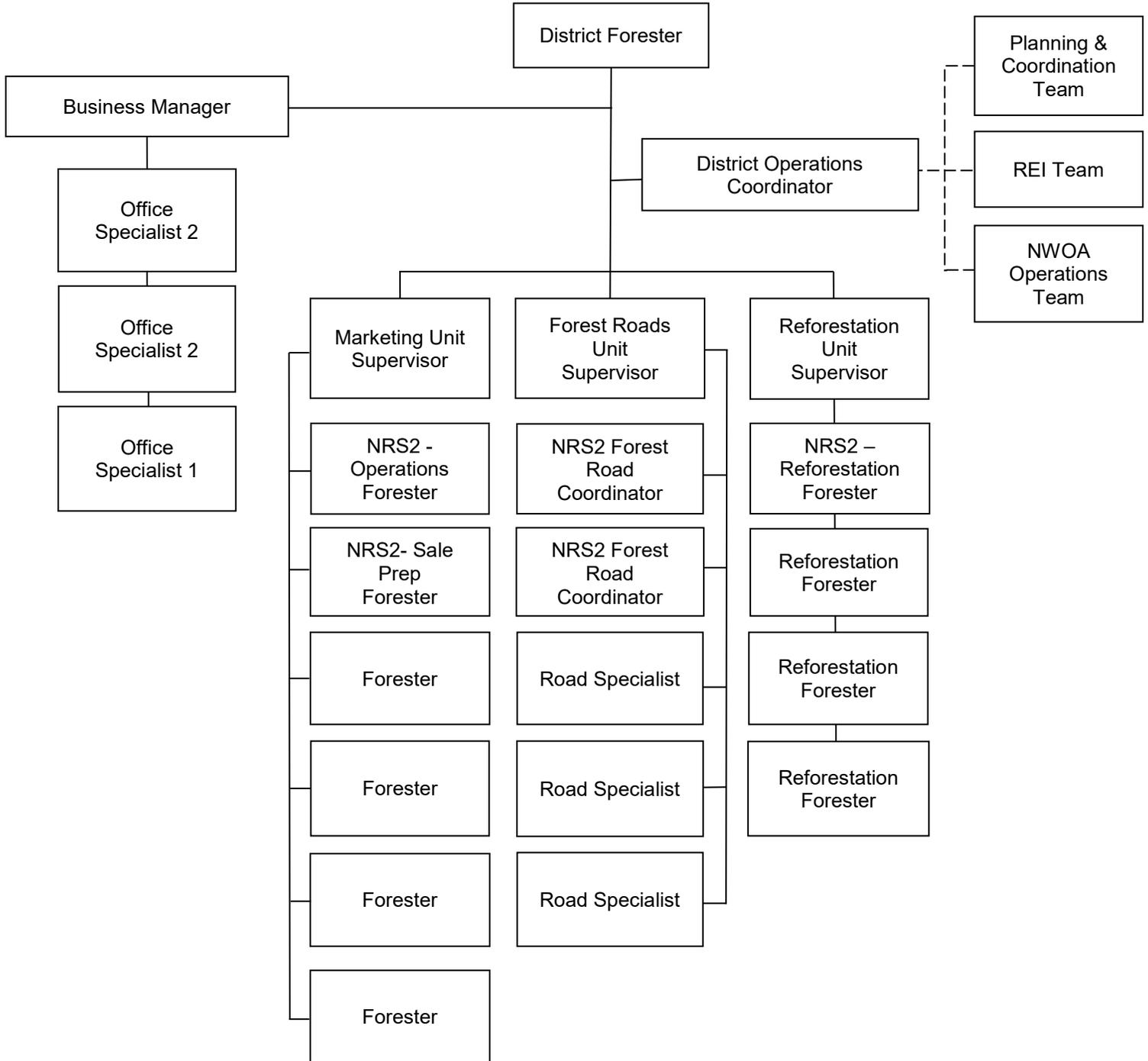
The Forest Roads unit is responsible for all aspects of road management and land surveying. These activities include road design and layout, rock pit development, road maintenance, property line location, road construction and improvement appraisals, contract preparation, and road contract administration. The Forest Roads unit works with the Operations, REI, and Planning & Coordination Team in developing the AOP.

The Reforestation unit is responsible for all activities in forest plantations from the time the harvesting is complete until the new stand produces commercial timber. The activities of this unit include site preparation, trapping, tree planting, vegetation management, tree improvement, and pre-commercial thinning. The reforestation unit also coordinates South Fork crews and administers contracts to complete these tasks. The Reforestation Unit will coordinate with the REI team as needed.

Administration consists of the District Forester, District Operations Coordinator, Office Manager, and Office Specialists. The District Forester and District Operations Coordinator provide policy direction, budget development, and oversight to the field units. The Office Manager, and Office Specialists provide clerical support to State Forest Management. These positions are responsible for initial public contact, distribution and filing of documents, and providing assistance at timber sale auctions. The Office Specialist is also responsible for issuing permits for firewood cutting, and special forest products.

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

Forest Grove District Organization Chart



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. FY20 AOP Major Modification

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: 2021

Date: 06/23/2020

Primary Operation	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value			
	BOF	CSL			Partial Cut	Clear-cut	Conifer	Hardwoods	Total	Gross	Projects	Net	
Crazy Train	100%		Wash	3		66	3.9		3.9	\$2,258,520	\$0	\$2,258,520	
Daring Doty	100%		Till	1		82	4		4	\$2,165,400	\$182,400	\$1,983,000	
Devil Ray	100%		Till	2		189	7.2		7.2	\$3,600,500	\$113,400	\$3,487,100	
Mac's Back	100%		Clatsop	2		109	3.4		3.4	\$1,727,500	\$260,000	\$1,467,500	
Mishmash	100%		Wash	1		113	4.7		4.7	\$2,455,960	\$295,400	\$2,160,560	
Mountain Cat	100%		Wash	3		81	4.5		4.5	\$2,503,760	\$9,160	\$2,494,600	
Natural Selection	100%		Till	4	91		1.0		1.0	\$615,040	\$0	\$615,040	
Rooster Cogburn	77%		Till	4		67	2.9		2.9	\$1,548,671	\$333,504	\$1,215,167	
	23%		Wash			20	0.9		0.9	\$457,379	\$98,496	\$358,883	
Rootless Rogers	100%		Wash	3		184	5.6		5.6	\$2,833,500	\$351,800	\$2,481,700	
Round Squared	100%		Wash	4		105	3.7		3.7	\$1,848,000	\$154,700	\$1,693,300	
Salmon Tail	100%		Till	2		82	3.9		3.9	\$2,081,160	\$157,000	\$1,924,160	
Sunset Music	85%		Till	4	247		5.7		5.7	\$3,299,649	\$214,200	\$3,085,449	
	15%		Clatsop		44		1.0		1.0	\$582,291	\$37,800	\$544,491	
Trask Flats	100%		Wash	1		178	6.0		6.0	\$2,922,530	\$7,000	\$2,915,530	
Sub-total:						382	1,276	58.4	0.0	58.4	\$30,899,860	\$2,214,860	\$28,685,000
Project WOC Sub-total:						0	0	0.0	0.0	0.0	\$0	\$490,000	
Total:						382	1,276	58.4	0.0	58.4	\$30,899,860	\$2,704,860	\$28,195,000

Alternate Operations

Ingersoll PC	100%		Wash		99		0.8		0.8	\$288,720	\$0	\$288,720	
Mainly Sain	100%		Wash			142	5.0		5.0	\$2,485,000	\$20,000	\$2,465,000	
Will C	100%		Till			90	2.9		2.9	\$1,170,000	\$200,900	\$969,100	
Total:						99	232	8.7	0.0	8.7	\$3,943,720	\$220,900	\$3,722,820

PRIMARY HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

District: Forest Grove

Fiscal Year 2021

Date: 06/23/2020

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
Crazy Train	1	X	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
Daring Doty	1	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	X	-	X	-	
Devil Ray	1,2,3	-	X	X	-	X	-	-	-	X	-	-	-	-	X	-	X	X	-	X	
Mac's Back	1	-	X	X	-	X	-	-	-	X	-	-	-	-	-	-	X	-	-	-	
Mishmash	1	-	X	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	
Mountain Cat	1	-	X	X	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	Transmission lines along SW corner
Natural Selection	1	-	X	X	X	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	
Rooster Cogburn	1	-	X	X	-	X	-	-	X	X	-	-	-	-	X	-	-	-	-	-	
Rootless Rogers	1,2	X	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X	
Round Squared	1,2	-	X	X	-	-	-	-	-	X	-	-	-	-	X	-	X	-	-	-	
Salmon Tail	1	-	X	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-	-	
Sunset Music	1	-	X	X	X	X	X	-	-	X	-	-	-	-	X	-	-	-	-	X	Underground transmission lines run along the southern edge
Trask Flats	1, 2	-	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' indicates that the operation contains areas that have been designated for the development of complex forest stands (LYR/OFS)

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

⁵ This table lists harvest operations (units or log haul routes) that are adjacent to streams that are known to contain T&E fish.

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	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	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
Ingersoll PC	1	-	X	-	-	-	X	-	-	X	-	-	-	-	X	-	-	-	-	-	
Mainly Sain	1,2,3	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	
Will C	1,2,3	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	*	-	*Cultural Resources will be reviewed with FY22

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 in consultation 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.

FOREST ROADS SUMMARY

District: Forest Grove

Fiscal Year: 2021

Date: 06/23/2020

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					
Crazy Train	0.00	\$0	0.00	\$0	\$0	\$0	\$2,258,520	0.0%	
Daring Doty	0.00	\$0	3.04	\$182,400	\$0	\$182,400	\$2,165,400	8.4%	
Devil Ray	0.62	\$43,400	2.56	\$64,000	\$6,000	\$113,400	\$3,600,500	3.1%	
Mac's Back	0.16	\$16,000	1.65	\$132,000	\$112,000	\$260,000	\$1,727,500	15.1%	
Mishmash	0.69	\$32,900	3.37	\$262,500	\$0	\$295,400	\$2,455,960	12.0%	
Mountain Cat	0.00	\$0	0.00	\$0	\$9,160	\$9,160	\$2,503,760	0.4%	
Natural Selection	0.00	\$0	0.00	\$0	\$0	\$0	\$615,040	0.0%	
Rooster Cogburn	1.28	\$153,600	1.98	\$192,200	\$86,200	\$432,000	\$2,006,050	21.5%	
Rootless Rogers	1.00	\$80,000	0.57	\$45,600	\$226,200	\$351,800	\$2,833,500	12.4%	
Round Squared	0.07	\$3,500	1.89	\$151,200	\$0	\$154,700	\$1,848,000	8.4%	
Salmon Tail	0.38	\$19,000	1.84	\$138,000	\$0	\$157,000	\$2,081,160	7.5%	
Sunset Music	2.50	\$250,000	0.00	\$0	\$2,000	\$252,000	\$3,881,940	6.5%	
Trask Flats	0.12	\$6,000	0.04	\$1,000	\$0	\$7,000	\$2,922,530	0.2%	
Sub-total	6.82	\$604,400	16.94	\$1,168,900	\$441,560	\$2,214,860	\$30,899,860	7.2%	
Sub-total WOC (see below)	0.0	\$0	1.14	\$460,000	\$30,000	\$490,000	\$0		
Totals	6.82	\$604,400	18.08	\$1,628,900	\$471,560	\$2,704,860	\$30,899,860	8.8%	

Alternate Operations

Ingersoll PC	0.00	\$0	0.00	\$0	\$0	\$0	\$288,720	0.0%	
Mainly Sain	0.00	\$0	0.00	\$0	\$20,000	\$20,000	\$2,485,000	0.8%	
Will C	0.43	\$30,200	5.35	\$83,500	\$87,200	\$200,900	\$1,170,000	17.2%	
Total	0.43	\$30,200	5.35	\$83,500	\$107,200	\$220,900	\$3,943,720	5.6%	

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				
Beaverdam 2.0mile Crossing Engineering Design				\$30,000	\$30,000	FDF	
Lousignont Culverts			1.14	\$24,000	\$24,000	FDF	
South Fork 0.5mile Bridge Installation				\$400,000	\$400,000	FDF	
McGregor Pit Road Culverts				\$35,000	\$35,000	FDF	
Locks & Cores 2020				\$1,000	\$1,000	FDF	
Total	0.00	\$0	1.14	\$460,000	\$490,000		

REFORESTATION AND YOUNG STAND MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2021

Date: 06/23/2020

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	1,589	\$192.00	\$305,088.00	37	\$192.00	\$7,104.00	1,626	\$312,192.00
Site Prep - Broadcast Burning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Piling Burning	800	\$5.00	\$4,000.00			\$0.00	800	\$4,000.00
Site Prep - Mechanical	236	\$200.00	\$47,200.00			\$0.00	236	\$47,200.00
Site Prep - Chemical - Aerial	1,236	\$59.00	\$72,924.00	37	\$59.00	\$2,183.00	1,273	\$75,107.00
Site Prep - Chemical - Ground	100	\$120.00	\$12,000.00			\$0.00	100	\$12,000.00
Initial Planting	1,339	\$160.00	\$214,240.00	37	\$160.00	\$5,920.00	1,376	\$220,160.00
Interplanting	250	\$132.00	\$33,000.00			\$0.00	250	\$33,000.00
Underplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Tree Protection - Barriers	405	\$74.00	\$29,970.00			\$0.00	405	\$29,970.00
Tree Protection - Direct Control	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release - Chemical - Aerial	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release - Chemical - Ground	200	\$120.00	\$24,000.00			\$0.00	200	\$24,000.00
Release - Manual	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Precommercial Thinning	239	\$145.00	\$34,655.00			\$0.00	239	\$34,655.00
Pruning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Stocking Surveys	2,500	\$0.00	\$0.00			\$0.00	2,500	\$0.00
Invasive Species	50	\$120.00	\$6,000.00			\$0.00	50	\$6,000.00
Roadside Spraying	200	\$200.00	\$40,000.00			\$0.00	200	\$40,000.00
Phellinus Surveys	950	\$0.00	\$0.00			\$0.00	950	\$0.00
Totals	10,094	--	\$823,077.00	111	--	\$15,207.00	10,205	\$838,284.00

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

Projects Conducted by	Board of Forestry		Common School Forest Lands			District		Total Cost
	Adults in Custody	Acres Planned	Average Cost*/Acre	BOF Cost	Acres Planned	Average Cost*/Acre	CSL Cost	
Site Prep - Broadcast Burning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Piling Burning	200	\$17.00	\$3,400.00			\$0.00	200	\$3,400.00
Site Prep - Mechanical	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Chemical - Aerial	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Site Prep - Chemical - Ground	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Initial Planting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Interplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Underplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Tree Protection - Barriers	405	\$118.00	\$47,790.00			\$0.00	405	\$47,790.00
Tree Protection - Direct Control	1,300	\$81.00	\$105,300.00			\$0.00	1,300	\$105,300.00
Release - Chemical - ground	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Release - Manual	550	\$92.00	\$50,600.00			\$0.00	550	\$50,600.00
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	45	\$225.00	\$10,125.00			\$0.00	45	\$10,125.00
Other	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Totals	2,340	--	\$221,815.00	0	--	\$0.00	2,340	\$221,815.00

RECREATION SITE MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2021

Date : 06/23/2020

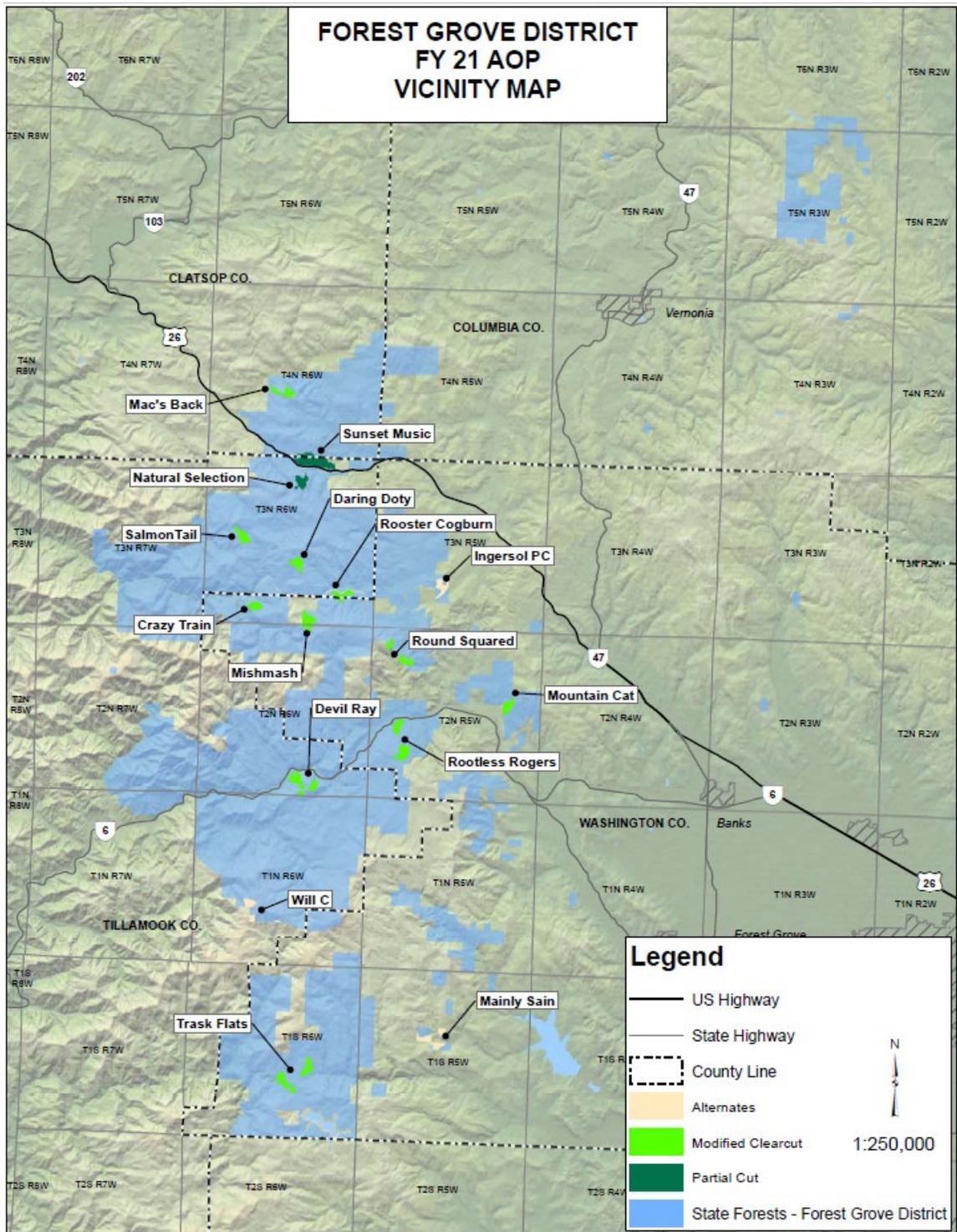
Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Campgrounds								
Stagecoach Horsecamp					\$1,000		\$1,000	Vault Service
Gales Creek Campground					\$9,000		\$9,000	Vaults (6000), Garbage (3000)
Reehers Camp					\$6,400		\$6,400	Vaults (4500), Garbage (1900).
Browns Camp				\$3,000		\$19,000	\$22,000	CXT Paint (3000), Vaults (9000), Garbage (10000) ATV Fund transfer dollars
Elk Creek Campground					\$6,500		\$6,500	Vault (4000), 2 portable toilets at the TH for 5 months (2500)
							\$0	
Designated Dispersed Campsites								
							\$0	
Little Browns Camp						\$3,500	\$3,500	Garbage Service 10 weeks (1000). 2 portable toilets for 5 months (2500). ATV Fund transfer dollars
							\$0	
Lyda Camp						\$2,500	\$2,500	2 portable toilets for 5 months. ATV Fund transfer dollars
							\$0	
Day Use Areas								
See Campgrounds for day use areas and campground associated trailhead sites							\$0	
							\$0	
Trailheads								
Kings Mountain	\$190,000				\$3,500		\$193,500	Vault Service (3500), Construction (190,000)This is match in support of grant funds
Summit Trailhead							\$0	
Rogers Camp Trailhead				\$750	\$2,000	\$2,000	\$4,750	CXT Paint (750) Vault Service (4000)
Bell Camp Trailhead							\$0	
Storey Burn Trailhead							\$0	
Fear and Loaming Trailhead					\$400		\$400	Site sign and information board. South Fork fabrication and installation. Road Crew Project

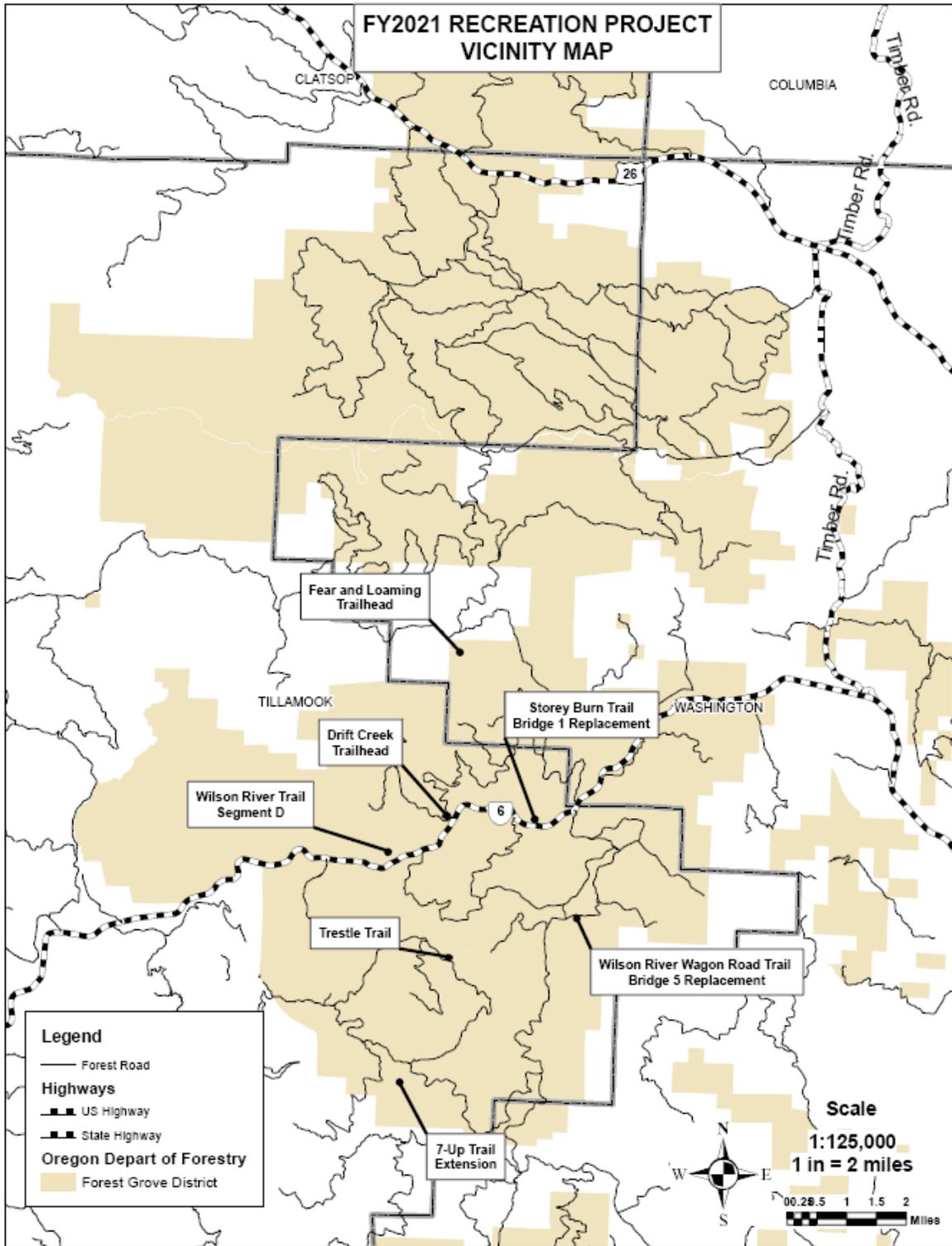
Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Drift Creek Trailhead					\$400		\$400	Site sign and information board. South Fork fabrication and installation. Road Crew Project
Deyoe Creek Trailhead							\$0	
University Falls Trailhead							\$0	
Raven Ridge Trailhead					\$400		\$400	Site sign and information board. South Fork fabrication and installation
							\$0	
Interpretive Sites								
Gales Creek Overlook							\$0	
Sunset Rest Area							\$0	
							\$0	
Other Operations								
Dumpsite Clean-up							\$3,000	
Volunteer Program					\$8,000		\$8,000	Recognition / Events / Radios /Supplies
Other Opeartions Expenses					\$55,000	\$5,000	\$60,000	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.
							\$0	
District Total							\$282,600	
Other Total							\$35,750	
TOTAL							\$321,350	

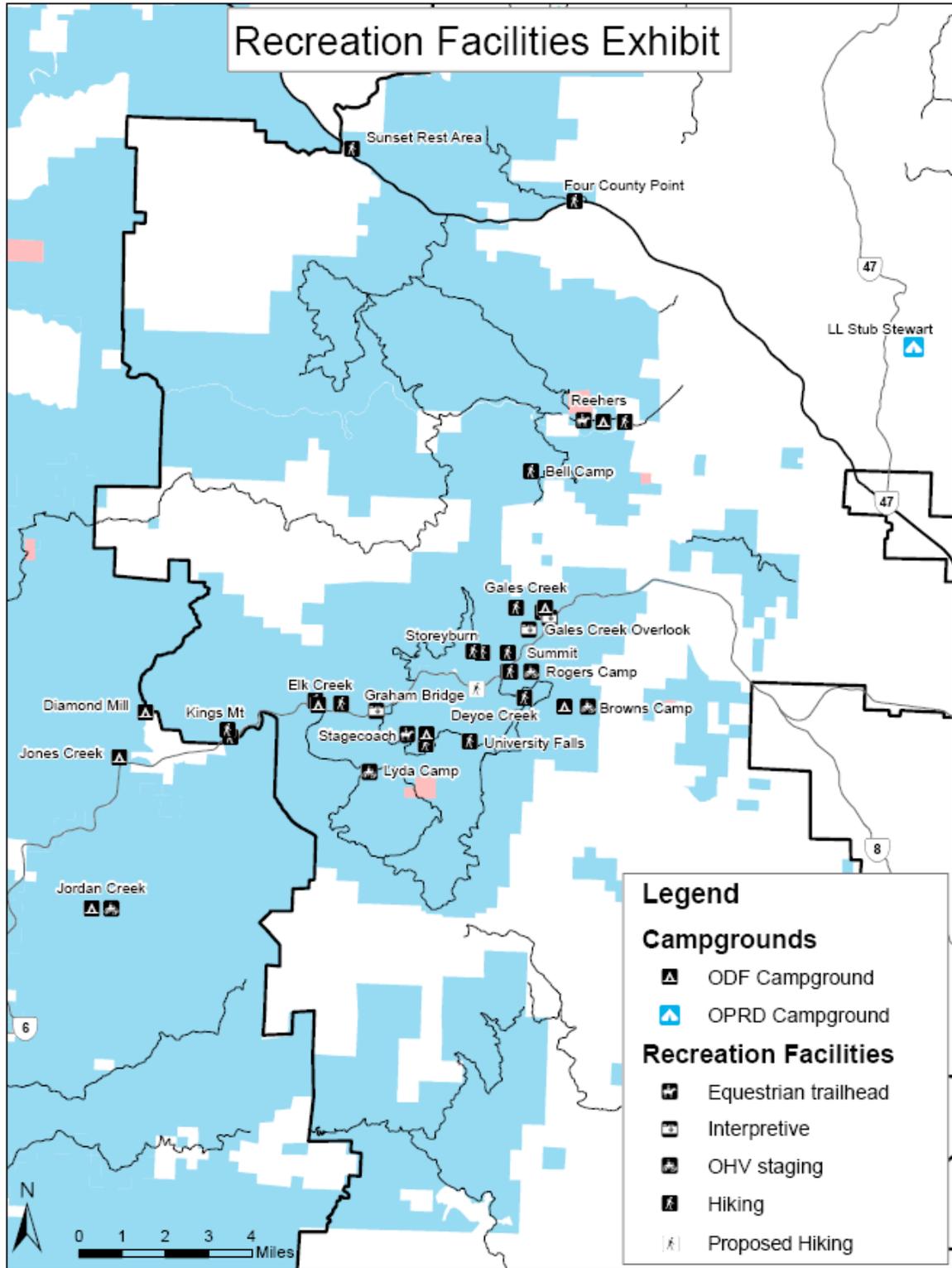
Appendix B

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 FY21 AOP review meeting for resource specialists, and were provided the Summary and Pre-Operations Reports for review.

ODFW identified several stream enhancement opportunities associated with sales in the FY21 AOP and some stream culverts that should be evaluated for fish passage if they have not been assessed already. Before determining if these potential enhancement projects will go into a full planning process, more field review is needed. The ODF Aquatic and Riparian Specialist and ODFW District Fish Biologists will perform field evaluations to make sure that the streams will benefit from the proposed projects. All culverts along haul routes for the proposed sales will be evaluated during sale preparation to ensure that they meet standards set in the ODF Roads Manual including fish passage.

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) will be reviewed on the ground to determine if cultural artifacts are present:

- House, cabin and Trail: Daring Doty
- Trail: Trestle Trail, Cedar Way to Hogsback Trail

Appendix D

PUBLIC COMMENT PROCESS FOR THE FY21 ANNUAL OPERATIONS PLAN

The Oregon Department of Forestry issued a Press Release in March 2020, announcing a formal 45 day public comment period for the FY21 Annual Operations Plans from March 23 through May 6, 2020.

The purpose of the Public Comment Period is 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 FY21 AOP since the Public Comment period:

Timber Harvest Operations:

- After review by the ODF Geotechnical Specialist, additional buffers have been added to the Will C and Mac's Back timber sales. A total of 2.9 acres have been added to buffers in Area 1 of Will C and a total of 1.7 acres have been added to buffers in the Mac's Back. The Pre-Operations Reports, maps, and Summary Tables have been updated to reflect these changes.
- In order to meet IP Objectives the following changes have been made: Mainly Sain and Ingersoll PC have been moved to Alternates and Round Squared has been moved to a Primary. These changes will result in a Total IP Volume of 610.4MMBF. The IP Objective is 610MMBF.

Recreation:

- Developed and Dispersed Facility Recreation Projects - Rogers Camp Trailhead Resurfacing and Reehers Camp Power Projects were removed from the FY21 AOP due to budget reductions.
- Non-Motorized Trail Development Project – Wilson River Trail Segment D was updated to add the wording “Project dependent on grant funding.”
- Recreation Grants Section made the following changes:
 - Removed the Travel Oregon Medium Competitive Grant from the list of grant applications for the Kings Mountain Trailhead Expansion Project. This grant is not available in 2020.

- Land and Water Conservation Fund and International Mountain Biking Association Trail Accelerator Grant applications have been submitted since Public Comment Period.
- Table A-5 – Trailheads – Kings Mountain Project – the 2021 REI Budget Strategic Investments has approved the increase in Grant Match Funds from \$100,000 to \$190,000.
- Table A-7 – The Funding and Status columns have been updated based on more accurate cost estimates for the projects, new information obtained, and the removal of the Travel Oregon Medium Competitive Grant.

Public comments and the responses are available upon request.

Appendix E

Pre-Operations Report

Pre-Operations Reports are available online through a Web Application at the following link:

<https://geo.maps.arcgis.com/apps/webappviewer/index.html?id=ae569c1ff445457eb8fe1b556699bce8>

Just zoom to the District you are interested in and click on any sale. A pop-up box should show up with a link to the Pre Op Report for the sale.

APPENDIX F

Major Revision to the Forest Grove District FY20 AOP

A major AOP Revision consists of the addition of one or more Harvest Operations to the AOP that were not included in a previously approved AOP. A primary harvest operation named Alpha Quadrant was included in the FY20 AOP. Alpha Quadrant is a three unit first entry partial cut of 33-36 year old Douglas-fir in the Wilark Management Basin. While reviewing the Wilark Basin for harvest candidates for the future FY22 AOP, the district found another stand of similar age and timber type that would haul out the same road system as the Alpha Quadrant harvest operation. It is a good operational decision to add this stand as a fourth unit to the approved Alpha Quadrant operation. This additional Unit has been reviewed by ODF Resource Specialists, and archaeologists from the Oregon Department of Transportation (ODOT). Attached below is the revised Alpha Quadrant Pre Operations Report for review. The District Forester will consider all comments received before deciding to approve the additional Unit.

Pre-Operations Report

Operation Name: Alpha Quadrant

County: Columbia (100%)

Elevation: 956 – 1,494 ft

Legal Description: T5N R3W, Section(s) 9, 10, 16, 17, 21, 22

Tax Code(s):

BOF%: 100 **CSL%:** 0

Sale Quarter: 4

I. VOLUME AND VALUE SUMMARY

Table 1. Types, Acres, and Value

Unit	Harvest Type	Anticipated Product ³	Gross Acres	Net Acres	MBF/Acre ¹	MBF/Unit ¹	\$ / MBF ²	\$ / Unit
1	PC-M	DF-S	91	80	7.1	568	\$375	\$213,000
2	PC-M	DF-S	99	95	7.1	675	\$375	\$253,125
3	PC-M	DF-S, WH-S	57	49	7.1	348	\$375	\$130,500
4	PC-M	DF-S	25	23	7.1	163	\$375	\$61,125
Total		Regeneration				1,754		
		Partial Cut	271	248				
							Gross Value	\$657,750
							Project Costs	\$163,100
							Net Value	\$494,650

1. Estimated harvest volume per acre for Unit.

2. Estimated 'price' (excluding Project Costs)

3. Anticipated Product (AA-B-C) – AA) SLI species code of the bid species, B) Size Class (S – small [average DBH < 15], M – medium [average DBH 15 to 23], L – large (average DBH > 23]), C) Special Product (P – Premium, H – Hardwood)

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information

Unit	Stand ID	Measured /Imputed ¹	Species	Age	TPA	DBH	BA	SDI	Net Acres ²
1	7044	I = 7070	DF,WP	36	213	13	209	57%	79
2	7056	M	DF,CH	33	185	14	192	52%	95
3	7080	M	DF,RA	35	172	13	169	46%	16
3	7082	I = 7080	DF,RA	35	172	13	169	46%	32
4	7070	M	DF,WP	40	213	13	209	57%	21
4	7083	I = 7076	DF,WH	32	268	11	166	49%	3

1. Identify the source of stand inventory information. Use the following codes: M = Measure SLI data, I = Imputed SLI data, P = Pre-Cruise Plots, O = other (if other, describe below).

2. Net Acres have been rounded to the nearest whole acre in this table. Stands that comprise less than one acre of a harvest unit are not reported in this table. Total "Net Acres" per unit in this table may not equal the total "Net Acres" per unit in table 1.

Table 3. Additional Stand Information

Unit	Stand	Snags/	Down Wood/	Forest Health		
	ID	Acre ¹	Acre ²	SNC	Phellinus	other ³
1	7044	0	717			
2	7056	0	771			
3	7080	1	815			
3	7082	1	815			
4	7070	0	717			
4	7083	1	133			

1. Identify the number of hard snags per acre (decay classes 1 and 2).
2. Identify the cubic feet per acre of hard down wood (decay classes 1 and 2)
3. Describe "Other" forest health issues

III. WILDLIFE AND T&E SPECIES CONSIDERATIONS:

Foresters need to read the Biological Survey Tracking Form (BSTF) prior to sale layout in order to ensure all T&E related information is understood. (See the T&E Coordinator or Biologist for the BSTF.)

1. A portion of the operation is within (Check all that apply):
 - TAS NSO Circle or Home Range, or Baseline Thiessen (BA required)
 - MMMA (BA required) None
2. Are Surveys for NSO being conducted for any portion of this operation?
 - Yes No Density surveys
3. Are Surveys for MM being conducted for any portion of this operation?
 - Yes No Systematic Survey Zone N/A
4. Are there any additional considerations (FPA Resource Sites, Species of Concern sites/Plants [from ORBIC¹], big game habitat/management, other)?
 - No Yes, please describe:

¹ Oregon Biodiversity Information Center
 FOREST GROVE DISTRICT FY 2021 Annual Operations Plan
 Approved - JUNE 2020

IV. DESIRED FUTURE CONDITION AND PRESCRIPTION:

Table 4. Stand Structure Information

Unit	Stand ID	Current	Desired Future	Net Acres ¹
1	7044	UDS	GEN	79
2	7056	UDS	GEN	95
3	7080	UDS	GEN	16
3	7082	UDS	GEN	32
4	7070	UDS	GEN	21
4	7083	UDS	GEN	3

1. Net Acres have been rounded to the nearest whole acre in this table. Stands that comprise less than one acre of a harvest unit are not reported in this table. Total "Net Acres" per unit in this table may not equal the total "Net Acres" per unit in table 1.

Table 5. Partial Cut Prescription (Complete only for Partial Cut Harvests)

Unit	Harvest Type	Harvest Species	Residual			
			Species	TPA	BA	% SDI
1	PC-M	DF	DF	106	130	35
2	PC-M	DF	DF	106	130	35
3	PC-M	DF	DF	106	130	35
4	PC-M	DF	DF	106	130	35

V. HARVESTING AND ACCESS CONSIDERATIONS:

Table 6. Harvest System and Access Summary

Unit	Harvest System		Slope (%)	Area Access	Seasonal Access
	% Cable	% Ground			
1	0	100	<35	Established	All Weather
2	0	100	<35	Established	All Weather
3	0	100	<35	Established	All Weather
4	0	100	<35	Established	All Weather

- Haul Route (list roads to be used for this operation): Karth & Enterprise
- Haul Route Condition (Describe specific considerations for this route, such as: seasonal restrictions, load restrictions, surface condition, truck turn arounds, recreation sites, etc.): TBD
- Adjacent Operations (Describe operations planned or sold that may be using the road concurrently or will be conducting road maintenance/improvement projects): Star Date 2020
- Are easements required for the haul route? Yes No

If "yes", list the existing easement numbers, specific road use provisions or fees and/or describe easements that need to be obtained.

Table 7. Transportation Management Summary (Miles)

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct				
Improve		2.01	4.51	
Maintain		2	4.9	
Block (Dormant)				
Vacate				
Stream Crossings				
Type F				
Type N				

5. Rock Sources for this operation: Commercial Source
6. Are property line surveys required for this operation? Yes No

VI. AQUATIC RESOURCES:

- Operating within the Inner Zone of a Type F stream? No Yes, describe the goal and prescription within this zone: This is a first entry thinning within a young stand. The goal of this thinning is to open up and improve growing conditions for the residual stand. This will help move the Inner Zone of the fish stream to a mature forest condition in a timelier manner.
- Do any streams need fish presence surveys? No Yes
- Are there H.E.R./P.D.F.T streams present? No Yes
- Is a portion of the operation within an Aquatic Anchor? No Yes, name:
- Are any streams classified as Domestic Water Use (FPA definition)? No Yes, describe protection measures:
- Is there a Stream Enhancement Project planned? No Yes, please describe:

VII. SLOPE STABILITY ISSUES:

Table 8. Summary of Slope Stability Assessment ¹

Area	Potential Hazards ²					Additional Geotech Review
	HLHL Risk to Public ³	Upland Unstable Slopes ⁴	Debris Flow Tracks, FPA ⁵ or FMP ⁴	Aquatic Adjacent Unstable Slopes ⁴	Inner Gorge ⁴	
1	N	Partial Cut. Establishing slope buffers to leave timber is not applicable.			None	
2	N				None	
3	N				None	

4			
---	--	--	--

¹ All assessments are based on the review conducted to-date related to proposed harvest boundaries; additional field work by the Geotechnical Specialist (Geotech), foresters, or others may identify additional sites or risks that could lead to further evaluation or modification of the operation. Additionally, most or all of the above potential issues may be mitigated during timber sale layout by boundary changes, buffering, green-tree retention areas or other modifications prior to harvest.

² The potential hazards are rated as: N – Not Present; NL - Not Likely, additional action is not required; L – Likely, additional review by forester or Geotech required and boundary changes may be needed; P – Present, specific hazards have been identified within proposed harvest and boundaries may need to be modified.

³ Refers to FPA Division 623, shallow rapidly moving landslides and public safety rules.

⁴ Refers to slope buffers in the Northwest Forest Management Plan.

⁵ Refers to slope related steam buffer in FPA 640-0210.

VIII. RECREATION RESOURCES:

Recreation issues/coordination: No Yes, please describe:

IX. HISTORIC AND CULTURAL RESOURCES:

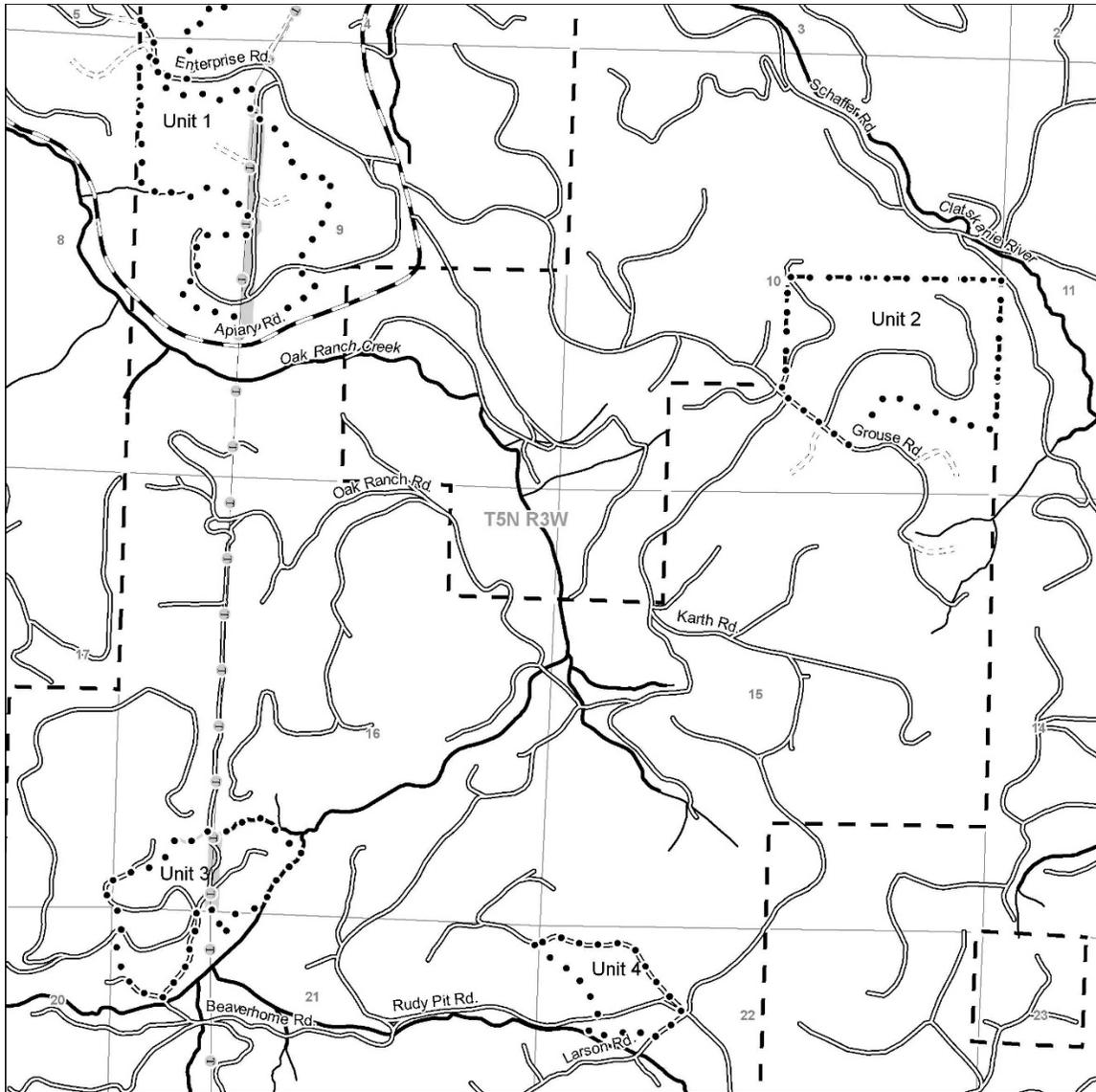
- Has the sale been reviewed by a qualified archaeologist for potential historic or cultural resource presence?
 Yes No
- Have any resources been identified that need consideration? No Yes, please describe:

X. SCENIC RESOURCES:

Are there scenic resources in the vicinity of this operation that need additional consideration? No Yes, please describe:

XI. OTHER RESOURCE CONSIDERATIONS:

- Has a review of the FLMCS layer determined that any resources not mentioned in the report above need additional planning? No Yes, describe below
 - There is a permanent inventory plot located along the southern boundary of Unit 2.
 - There is a transmission line that runs through Units 1 and 3. Extra care will be taken during felling and yarding.
- Are there any other resources present that need additional consideration? No Yes, please describe:



**FY 2020 - Forest Grove District
Alpha Quadrant - Modification
Portions of Section(s) 9, 10, 16, 17, 21, 22 T5N, R3W, W.M.
Columbia County**

Legend

- • Sale Boundary
- Ⓜ Transmission Lines
- Unsurfaced Road
- Surfaced Road
- Paved Road
- Perennial Fish Stream
- Perennial Non-Fish Stream
- No Harvest Area
- Ownership Boundary

State Forest Division
11/12/2019
This product is for informational use and may not be
suitable for legal, engineering, or surveying purposes.

1 inch = 1,667 feet

1,700 850 0 1,700 Feet

Unit 1	80 Acres (PC-M)
Unit 2	95 Acres (PC-M)
Unit 3	49 Acres (PC-M)
Unit 4	23 Acres (PC-M)
Total	248 Acres



Appendix G

Landscape Design – Forest Grove District Implementation Plan Minor Modification Notice

As described in the Forest Grove District 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 Forester concurrent with the Annual Operation Planning process.

The district is proposing to change 17 acres that have a current DFC of Layered and 3 acres that have a current DFC of Older Forest Structure to non-complex or "general" to create logical operational timber sale boundaries (Mountain Cat, Round Squared - Unit 2, Salmon Tail). Another 30 acres with a DFC of LYR are proposed for a modification to "general". These acres, located within the proposed Rootless Rogers timber sale, are heavily infested with the root disease *Phellinus weirii* and are currently falling apart. The proposed timber sale is designed to remove all of the trees from the area and it will be reforested with seedlings immune or resistant to the root disease.

The district is proposing to modify 77 acres that currently have a DFC of "general" and change it to LYR. These acres are alongside and upslope of the South Fork of Gales Creek, a fish bearing stream (64 acres) and also upslope of Highway 6 (13 acres). These acres contain multiple tree species, are capable of becoming complex structure and are located along a fish bearing stream or scenic areas along Highway 6. This new complex designation would expand upon areas that already have a DFC of complex structure. See map below.

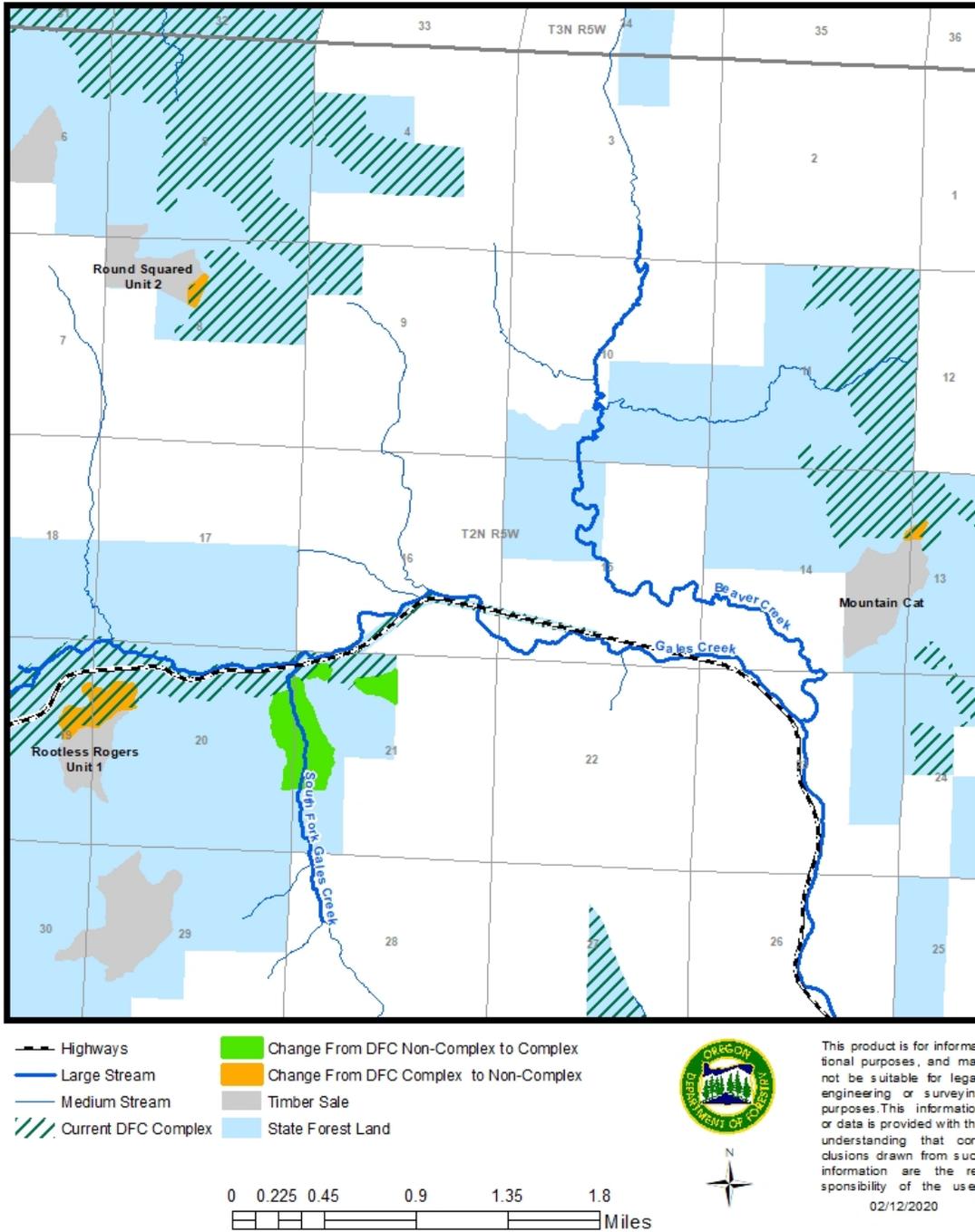
The removal and addition of acres within the landscape design was reviewed by an ODF biologist and other resource specialists.

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	47	LYR	77
OFS	3	OFS	0
Total Acres Removed	50	Total Acres Added	77

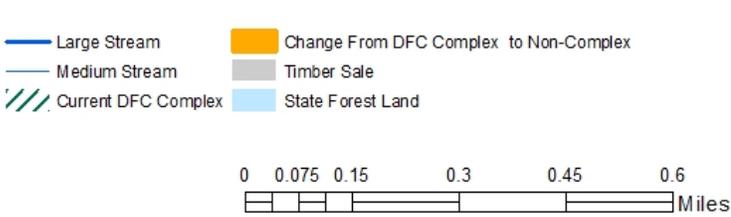
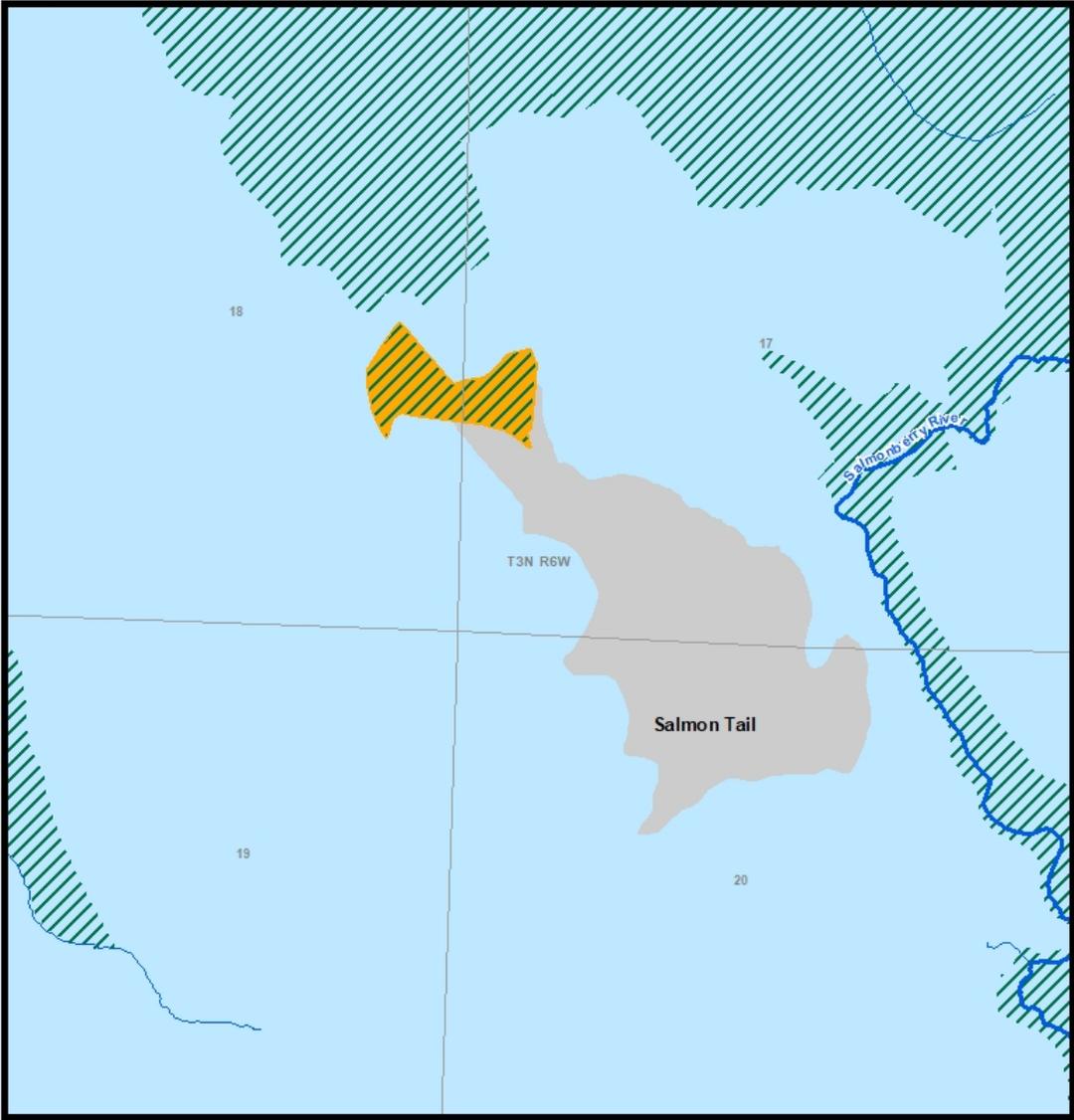
Forest Grove District

Landscape Design - Desired Future Condition Revision



Forest Grove District

Landscape Design - Desired Future Condition Revision



This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

02/12/2020