



Oregon

Kate Brown, Governor

Department of Forestry

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"STEWARDSHIP IN FORESTRY"

To: Andy White, Area Director
From: Kate Skinner, Tillamook 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 Tillamook 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 2009 District Implementation Plan, 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 minor modification 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 46.3 MMBF of harvest volume. This volume will be achieved through 0 acres of partial cut harvest and 1,828 acres of regeneration harvest. There are 9 primary operations and 2 alternate operations within this plan. The operations are estimated to generate gross revenues of approximately \$15,833,628 and net revenues of \$12,634,367 within Tillamook County. The volume is slightly under the IP target of 47 MMBF. The goal is to achieve the average of the Annual Harvest Objective (AHO) over the expected duration for the IP. 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:



Kate Skinner
Tillamook District Forester

Tillamook District

2021 ANNUAL OPERATIONS PLAN



Tillamook DISTRICT

FY 2021 ANNUAL OPERATIONS PLAN

OVERVIEW

This plan describes the activities and outcomes that Oregonians can expect to see on the Tillamook District 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 1,449,000 trees on 3,727 acres. Conducting vegetation management activities on 6,127 acres and animal management activities on an additional 8,377 acres to ensure the survival and growth of these plantations.
- Conducting density and operational surveys for northern spotted owls and marbled murrelets covering the majority of the district and surveying approximately 3 miles of streams for the presence of fish habitat.
- Protecting streams and water resources through a series of buffers and seasonal restrictions.
- Stream improvement projects. An initial screen by ODF's Aquatic and Riparian Specialist suggests that there is a stream near a planned harvest unit that could benefit from large wood additions to the stream system. Further field reconnaissance will be completed by District Staff and ODFW to determine possible candidates.
- Habitat development projects such as creating snags, retaining green trees in clearcut areas, and leaving down wood, all for wildlife benefits in harvest areas and future forests.
- Maintaining 120 miles of road and improving approximately 60 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 46 million board feet of timber volume, through modified clearcuts, generating revenue of an estimated \$12 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:
 - 6 campgrounds
 - 5 day use areas
 - 1 highway wayside interpretive sites
 - 12 trailhead facilities

- Providing a safe and clean environment for the myriad of dispersed activities that occur across the forest – hunting, camping, angling, sight-seeing, target shooting, swimming, mushroom picking, etc.
- Maintaining, managing, and patrolling the 326 miles of motorized and 20 miles of non-motorized trails, striving to protect the trail investments, provide for user safety, address developing trail issues, and protect water quality.
- Supporting the important volunteer network that assists in forest management including the following programs:
 - Camp Hosts, Adopt a Trail and Forest Observer
 - SOLVE Beach & Riverside Cleanup
 - Trail Maintenance and Construction Work Parties
 - OHV Trail Equipment Volunteer Operator
- Facilitating the pre-planned 12 to 16 organized motorized trail use events and writing and administering 2 to 4 special use permits for non-motorized trail use events. Evaluate new event proposals for fit with forest goals
- Providing a firewood cutting program and miscellaneous forest products permits (salal, mushrooms, etc.) as done in 2019.
- Supporting ongoing research on the district, in partnership with research cooperatives and universities.

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	14
Forest Roads Management	19
Overview	19
Road Construction	19
Road Improvement.....	19
Road Access Management	19
Road Maintenance	20
Management of Rock Source/Supply	20
Land Surveying	21
Young Stand Management	21
Seedlings / Nurseries	21
Site Preparation	22
Planting	22
Tree Protection	23
Vegetation Management – Release Treatments	24
Pre-Commercial Thinning (PCT).....	24
Pruning.....	24
Stocking Surveys.....	25
Invasive Species	25

Roadside Spraying.....	25
Recreation Management.....	25
Overview of Recreation Management	25
Facilities	26
Dispersed Use.....	26
OHV Trails.....	27
Non-motorized Trails.....	28
Volunteer Program and Partnerships.....	29
Event Management.....	29
Grants	29
Other Integrated Forest Management Projects.....	30
Aquatic & Riparian Management	30
Land Exchange	31
Law Enforcement and Public Safety	32
Firewood Cutting Program.....	32
Non-Timber Forest Products	32
Planning	32
Stand Level Inventory	32
Wildlife Surveys	32
Research and Monitoring.....	33
Public Information and Education	34
Administration	35
APPENDICES	37
A. Summary Tables.....	38
B. Maps.....	48
C. Consultation with Other Agencies.....	50
D. Public Involvement.....	51

E. Pre-Operations Reports.....52

F. Land Management Classification System53

G. Landscape Design Minor Modification.....54

INTRODUCTION

This annual operation plan (AOP) outlines state-owned forestland managed by the Tillamook 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 *Tillamook District 2009 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 Tillamook 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 reviewed 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. In the short term some work will not be accomplished especially in Recreation and Reforestation. 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 Tillamook 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 46 million board feet in volume, generate gross revenues of approximately \$15,833,628 and net revenues of \$12,634,367. The goal is to achieve the average of the Annual Harvest Objective (AHO) of 47 MMBF over the expected duration for the IP. In order to achieve this average, the Tillamook District will harvest 46 million board feet in volume for FY21 and 46 million board feet or less for FY22. 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 Tillamook 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 Tillamook District 2009 Implementation Plan. Harvest values are acres, Volume is in MMBF.

Annual Harvest Objectives	IP Annual Objective		2021 AOP
	Low	High	
Volume (MMBF)	47		46.3
Partial Cut Harvest	0	3,450	0
Regeneration Harvest	800	3,150	1,828

Table 1 shows the proposed acres by harvest type. The 1,828 acres of regeneration harvest planned for FY21 represents less than 1 percent of the district. All of the regeneration harvest acres will be designed as modified clearcuts. The anticipated harvest acres, volume, and revenue for each proposed operation in this AOP are listed in the “Harvest Operations – Financial Summary” Table A-1 in Appendix A.

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

Fiscal Year	IP Annual Objective	AOP Planned Volume	AOP Sold Volume	Cumulative Difference from Objective ¹
FY 10	47	47	34.9	-12.1
FY 11	47	47.2	47.5	-11.6
FY 12	47	47.3	51.0	-7.7
FY 13	47	47.3	43.4	-11.3
FY 14	47	50.2	47.4	-10.9
FY 15	47	47	48.8	-9.1
FY 16	47	47.6	48.0	-8.2
FY 17	47	47.1	50.9	-4.3
FY 18	47	47.1	53.2	1.9
FY 19	47	47	47.5	2.4
FY20	47	47	46	1.4
FY 21	47	46.3	--	--

1. IP Harvest Objective versus Sold Volume.

Overview of Structural Components

The guidelines for managing structural habitat components listed under Landscape Management Strategy 3 in the NWO State Forests Management Plan (pg. 4-52) will be followed for the 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, headwalls and Green Tree Retention areas that may be very difficult to harvest. The scattered individual upland leaves trees strategies include but are not limited to; minor tree species where available, trees with defect or decay, trees to be used as future tailholds, leaving trees around snags, and large trees that are not desired at the mill. Additional trees may be left in areas with a DFC of complex or additional SOC requirements. 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. Snag strategies include retaining legacy structure, bear damaged trees will count towards the snag requirement, creation of snags in groups of 4-7 for purple martin habitat and if there are significant scattered upland green trees no snag creation will be required. Down Wood will continue to be created through bucking practices, leaving felled snags in the unit and tops on ground yarding areas.

Harvest Operations within Terrestrial Anchor Sites and Aquatic Anchors

The Tillamook District implements the State Forests' Species of Concern Strategies that specifically identifies fish and wildlife species of concern on the Tillamook District. 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 emphasized. 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 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 the cumulative operations in TAS since the strategy was adopted (AOPs 2012 - 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	1,828	0	21,201	4,026
% of District Acres	0.01%	0%	8.5%	1.6%
Terrestrial Anchor Site (TAS) Basins				
Bastard Creek (5,021 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Ripple Creek (3,831 ac)	0	0	0	559
% of Acres	0%	0%	0%	14.6%
Miami (6,396 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Hembre (2,981 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Boundary (2,138 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
All TAS (20,367 ac)	0	0	0	559
% of Acres	0%	0%	0%	2.7%

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	1,828	0	16,992	1,643
% of District Acres	0.06%	0%	6.7%	0.06%
Aquatic Anchor (AA) Basins				
Ben Smith Creek (3,602 ac)	277	0	605	0
% of Acres	7.6%	0%	16.7%	0%
Cedar Creek (7,214 ac)	68.2	0	874	0
% of Acres	0.9%	0%	12.1%	00%
Coal Creek (1,237 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Cook Creek (18,286 ac)	0	0	845	322.5
% of Acres	0%	0%	4.6%	1.7%
East Fork S Fork Trask (15,627 ac)	331	0	2,542	290.4
% of Acres	2.1%	0%	16.2%	0.7%
Elkhorn (3,860 ac)	119.7	0	692	0
% of Acres	3.1%	0%	17.9%	0%
Foley Creek (4,403 ac)	0	0	146	0
% of Acres	0%	0%	3.3%	0%
Little N Fork Wilson (10,310 ac)	0	0	1117	0
% of Acres	0%	0%	10.8%	0%
Miami (13,910 ac)	118.2	0	297	0
% of Acres	0.08%	0%	2.1%	0%
Middle Kilchis (14,155 ac)	0	0	323	0
% of Acres	0%	0%	2.2%	0%
S Fork Salmonberry (2,813 ac)	0	0	0	567.6
% of Acres	0%	0%	0%	20.1%
All Aquatic Anchors (95,417 ac)	914.1	0	7,110	1,181
% of Acres	0.1%	0%	7.4%	1.2%

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 11 management basins on the Tillamook 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
N. Fork Nehalem	0	0
Lower Nehalem	0	0
Short Sands	0	0
Miami	0	118
Kilchis	0	0
Tillamook Bay	0	0
Wilson	0	677
Tillamook River	0	0
Trask	0	893
Nestucca	0	140
Little Nestucca	0	0
Totals	0	1,828

North Fork Nehalem Basin

There are no harvest operations planned in this basin for FY21.

Lower Nehalem Basin

There are no harvest operations planned in this basin for FY21.

Short Sands

There are no harvest operations planned in this basin for FY21.

Miami

South Minich (Primary): This sale is made up of one modified clearcut unit (Unit 764) totaling 118 acres. There are two stand types that make up this sale. The western ½ of the unit is a 36 year old Douglas-fir plantation that has Swiss Needle Cast (SNC). The eastern ½ of the unit is a 65-85 year old dense Douglas-fir/western hemlock stand. This sale has a DFC of non-complex and the current condition is UDS.

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 in the Miami Aquatic Anchor. A potential domestic water source was identified during sale planning and will be verified and buffered appropriately during sale layout. The ORBIC layer indicates the potential presence of the Northern red-legged frog. During sale layout areas that contain slow/still water or pools in the riparian areas will be identified and the Biologist will be consulted to determine sale layout recommendations.

Potential stream enhancement opportunities may exist within this sale area. Further evaluation will be completed with the Aquatic and Riparian Specialist.

Kilchis

There are no harvest operations planned in this basin for FY21.

Tillamook Bay

There are no harvest operations planned in this basin for FY21.

Wilson

Hembre Falls (Primary): This sale includes three modified clearcut units (Units 507, 560, and 853) totaling 279 acres. These stands are 55 years old and are comprised of red alder and Douglas-fir. These sale areas have a DFC of non-complex and the current condition for all three units in UDS.

GIS data (ORBIC) indicates that Queen-of-the-forest, a state candidate species, may be present within the sale area. Foresters will note any specimens encountered in the field and implement any appropriate protection measures.

Unit 507 is within 3 miles of Highway 6, which is classified as a scenic highway. Consideration will be given to management practices that may have visual impacts (e.g. green tree arrangement, residual slash etc.).

Potential stream enhancement opportunities may exist within this sale area. Further evaluation will be completed with the Aquatic and Riparian Specialist.

Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

Smith and Archer's (Primary): This sale consists of three units (Units 325, 346, and 616) totaling 288 acres. These stands are 69 years old and are comprised of Douglas-fir, red alder, and a component of western hemlock. The majority of Units 325 and 346 were thinned in 1996 while Unit 616 has had no prior management. These areas are planned modified clearcuts.

These sale areas have a DFC of non-complex and the current condition for all three units in UDS.

All of these areas are in the Ben Smith Aquatic Anchor.

OHV trails are within the sale areas and the OHV Coordinator has reviewed the trails. Some trails may be rerouted to prevent or reduce resource damage.

The sale area is within 3 miles of Highway 6, which is classified as a scenic highway. Consideration will be given to management practices that may have visual impacts (e.g. green tree arrangement, residual slash etc.).

Thundercat (Primary): This sale is made up of one modified clearcut unit (Unit 839) totaling 110 acres. The main species in this stand are Douglas-fir and red alder. Stand age ranges from 46 – 59. This stand has a DFC of non-complex.

Current condition for this stand is (UDS). Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

There is less than a quarter mile of new road construction planned (0.16) and a little over a mile of road improvement to be completed with this sale.

The majority of this unit lies within the Cedar Creek Aquatic Anchor.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

There is an OHV trail adjacent to the sale area. Foresters will consult the OHV Coordinator prior to sale layout to review any resource considerations.

Jordan Ridge (Alternate): This sale includes three modified clearcut units (Units 850, 851, and 904) totaling 295 acres. These stands are 65 years old and are comprised of Douglas-fir and red alder. These sale areas have a DFC of non-complex and current condition for all three units is UDS.

Potential stream enhancement opportunities may exist within this sale area. Further evaluation will be completed with the Aquatic and Riparian Specialist.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

Power Range (Alternate): This sale includes five modified clearcut unit (Units 123, 125, 442, 443, 512, and 815) totaling 565 acres. The main species in these stands are Douglas-fir and red alder. Stand ages range from 58 – 69. These stands have a DFC of non-complex. Current condition for all stands is mostly (UDS), with a small portion being in Closed Single Canopy (CSC).

GIS data (ORBIC) indicates that Queen-of-the-forest, a state candidate species, may be present within the sale area. Foresters will note any specimens encountered in the field and implement any appropriate protection measures.

Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

There are approximately six miles of new road construction planned for this sale and about twelve miles of road improvement.

The sale area is within 3 miles of Highway 6, which is classified as a scenic highway. Consideration will be given to management practices that may have visual impacts (e.g. green tree arrangement, residual slash etc.).

There may be potential domestic water sources adjacent to the sale area. Forester's will protect these resources in compliance with all legal requirements. ODF buffer requirements surpass domestic buffer rules in the Forest Practices Act.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

Tillamook River

There are no harvest operations planned in this basin for FY21.

Trask

Coast Bill (Primary): This sale includes three modified clearcut units (Units 93, 94, and 104) totaling 333 acres. These areas are predominately Douglas-fir stands showing symptoms of SNC with a mixture of red alder mostly in the riparian areas. These sale areas have a DFC of non-complex and current condition for all three units is UDS. Stand age for all three units is approximately 53 years old.

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 potential stream enhancement project has been identified with this sale. The project would include wood placement on Bill Creek. Further evaluation of this project will be completed with the Aquatic and Riparian Specialist.

These sale areas have active recreation use year round. Additional recreation traffic includes heavy use in the spring and summer camping seasons and fall hunting season. Special considerations will be made if lines hang over South Fork Trask Road during harvest.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

Cruiser Creek (Primary): This sale includes two modified clearcut units (Units 516 and 521) totaling 229 acres. These are primarily Douglas-fir stands with red alder and some western hemlock present and stand ages range from 48-55 years old. Current condition of these stands is (UDS) and both have a DFC of non-complex.

Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

There will be approximately 2.5 mile of new road construction and a little over 20 miles of road improvement with this sale.

Unit 521 lies within the Elkhorn Creek Aquatic Anchor.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

Steampot (Primary): This sale includes three modified clearcut units (Units 589, 594, and 880) totaling 331 acres. These are primarily Douglas-fir stands with red alder present and range in age from 49-60 years old. Current condition of these stands is (UDS) and all have a DFC of non-complex.

Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

There will be about a 0.25 mile of new road construction and about 13 miles of road improvement with this sale.

Potential stream enhancement opportunities may exist within this sale area. Further evaluation will be completed with the Aquatic and Riparian Specialist.

All three units lie within the E. FK. of the S FK. Trask River Aquatic Anchor.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

Nestucca

Clarence Creek (Primary): This sale is made up of one modified clearcut unit (Unit 175) and totals 115 acres. This is a Douglas-fir and red alder stand that is approximately 43 years old. Current condition is (UDS) and the sale area is in general stewardship (GEN).

Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

There is less than one mile of new road construction planned and about a mile of improvement to be done with this sale.

There is a progeny site adjacent to the sale area but not within the sale boundary.

Eastern Moon (Primary): This sale is located in an isolated ownership parcel in the Nestucca Basin and consists of one modified clearcut unit (Unit 769) totaling 25 acres. This stand is comprised of 90 year old Douglas-fir and has a salmonberry understory. The Douglas-fir shows symptoms of SNC and white speck. This sale has a DFC of non-complex and current condition is shown as older forest structure (OFS). This stand was imputed to a mixed stand that was over 20 miles away. Cruise information and field evaluation showed that this Douglas-fir/red alder stand doesn't meet the OFS structure requirements because of trees size, lack of species mix, and lack of understory development. This stand has been thinned twice and has very few intermediate trees.

Following the completion of harvest, the unit will be planted with a mixture of seedlings to be determined closer to the time of reforestation.

The ORBIC layer indicates the potential presence of purple martin in a small portion of the area. This species is currently state designated (Oregon) as "Sensitive-Critical" and is a Conservation Strategy Species. The Area Wildlife Biologist will be consulted during sale layout to determine discuss snag retention and snag creation levels to provide for snags that are well distributed throughout harvest area.

The Geotechnical Specialist has completed a preliminary review of the sale area but will perform additional review prior to sale layout.

Little Nestucca

There are no harvest operations planned in this basin for FY21.

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. Board of Forestry performance measure #5 sets targets for road network hydrologic connectivity and road related fish passage improvements.

Proposed work order contracts continue to address FEMA projects and priority fish passage improvement projects. 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 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.

North Coast Travel Management Area

The North Coast Travel Management Area (TMA) on the Tillamook State Forest is located on the north end of the forest in the God's Valley area. The TMA regulates vehicle travel on spur

roads during archery and the general deer and elk seasons to provide “walk in” hunting opportunities, increase bull/buck escapement, and reduce road damage. Sign maintenance and public contact in the TMA is performed by volunteer and district staff. Enforcement of the TMA is provided by Oregon State Police and County Deputies on a limited basis. Maps of TMA areas are available at ODF and ODFW offices. Tillamook District has partnered with Oregon Department of Fish and Wildlife on this project since 2002.

Oregon Hunters Association Gate Program

Every September through November, during hunting season, road closures occur on the district to provide the public with “walk-in” hunting and help with bull/buck escapement. The program uses locked metal gates to restrict vehicle access to selected spur road systems from September 1st through November 30th each year. Gate locations are reviewed each year and moved to new locations as harvest units grow up and are able to provide cover. ODF has partnered with the Oregon Hunters Association (Tillamook Chapter) and ODFW to implement the OHA Gate Program since 2005.

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:

- Clay Corner
- Coast Bill
- Cruiser Creek
- Hembre Falls
- South Minich
- Steampot
- Thundercat

Annually, the District requires between 7,000 to 12,000 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:

- South Minich – 1 mile
- Clarence Creek – 0.5 miles

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.

The majority of the on the ground reforestation activities will be completed by using experienced contractors. A portion of the activities will be completed by utilizing district staff and crews from South Fork Camp. The South Fork crews work on activities such as tree packing, tree protection, mechanical hand release, and noxious weed control.

Due to the reorganization of the State Forest Districts leveling the workforce between districts and the unexpected market conditions of timber sale purchaser's moving quickly on sales created a high work load in Tillamook. 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 is 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 the first year and then transplanted the second year 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 from an extensive post-harvest survey. Final planting plans are then finalized in the fall after inventories from seedling nurseries are received.

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. Initial plant species will consist of western hemlock, noble fir, western red cedar, and Douglas-fir. Douglas-fir will be included in planting units outside of the areas of severe Swiss needle cast. The target at age 10 is a mixed conifer stand with a minor hardwood component. These stands generally are more diverse, are the most resistant to pest and environmental impacts and retain the most options for the future. South Fork Crews will assist with planting operations by providing daily tree packing crews.
- 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. Actual plans will be made after stocking surveys have been completed in the fall.
- 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.

Bud Caps: Bud caps are installed on Douglas-fir seedlings in 0-2 year old plantations with heavy elk/deer browse pressure. A combination of contract and South Fork Camp crews will be responsible for the accomplishment of these acres.

Direct Control: Trapping mountain beaver prior to planting a harvest unit significantly reduces damage from these animals. Follow-up trapping may also be needed in 1-3 year old plantations where small populations have rebounded and are causing damage on young seedlings.

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. The actual plan will be developed in late spring or early summer when competing brush, red alder, and big leaf maple is more developed and actual needs can be assessed. Contract crews will be responsible for accomplishing of these acres.

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, threaten to change the stand from conifer dominate to hardwood dominate. 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. The actual plan will be developed in early spring when brush and red alder is more developed and actual needs can be assessed. Both contract and South Fork Camp crews will be responsible for the completion of these acres.

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. The actual plan will be developed early in the AOP year after potential stands have been surveyed and accessed for PCT need.

Pruning

No pruning activities are planned for this AOP.

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 and Scotch broom 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 Spraying

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 includes hunting, fishing, target shooting, OHV riding, mountain biking, hiking, equestrian use, mineral collection, mushroom picking, sight-seeing, and camping. River access for day use, white water kayaking and white water canoeing continues to grow while anglers increasingly use walk-in access for remote bank fishing opportunities. Anglers also launch drift boats and pontoon boats from developed sites like Stones Road Boat Ramp, Peninsula, or other Oregon Department of Fish and Wildlife boat ramps. Use

levels for all activities continue to increase while resources and budget are being held steady.

At present the district manages 4 fee campgrounds, 2 OHV fee campground, 2 fee designated campsite areas, 4 OHV staging areas, 5 day-use sites, 1 highway wayside interpretive site, 82 designated dispersed sites, 3 boat launch facilities, 20.1 miles of non-motorized trail, 326 miles of designated OHV trails, plus multiple rustic trailhead facilities that provide access to motorized and non-motorized trail network.

Current direction for management is captured in the State Forest Division Bulletin, "Near Term Direction for Recreation Management and Investment on State Forests", September 2011. The recreation management activities planned for FY 2021 reflect a reduction in permanent staff. Summer service levels will be supported by seasonal staff. Tillamook District will work to protect the existing infrastructure, provide for public safety and sanitation, and mitigate damage to natural resources.

ODF continues to receive All Terrain Vehicle (ATV) Transfer fund dollars administered by Oregon State Parks to support 1 NRS1 OHV Coordinator and associated Service and Supply such as vehicle costs, in the Tillamook District.

Facilities

Regular facility maintenance includes protecting assets, infrastructure, and providing for safety and sanitation. Activities include fence repair, sign replacement, fire grate and picnic table repairs, painting, wood preservation, janitorial work, graffiti and moss removal, dust abatement, trash pickup, septic pumping, hazard tree removal, parking lot rocking, and updating information boards. As a service to our campground visitors, firewood is available for purchase at Jones Creek and Nehalem Falls Campground. Facility maintenance work is accomplished with recreation staff, South Fork crews, South Fork shop, volunteers and contracted services such as trash and vault pumping.

All facilities, sites, and trailheads will receive some level of maintenance throughout the year.

Dispersed Use

Dispersed use is found across the district. In the Trask, Cook Creek and Wilson basins designated dispersed campsites have been established. These areas of high use have benefited from designated, fire safe sites that provide for resource protection. Dispersed camping outside of these areas can be challenging to manage during the high use seasons and often require additional education on public use restrictions during fire season. Dispersed use continues to grow as does the need for cleanup, mitigation and resource protection.

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 Site Sign	Morrison Eddy Campground Sign	Recreation staff, South Fork Sign Shop, South Fork Crew	Install a log frame campground site sign at Morrison Eddy Campground.
Signpost Replacement	Campground Campsite Sign Post Replacement	Recreation staff, South Fork Sign Shop, South Fork Crew	Replace aging campsite sign posts at Keenig Creek Campground, Jordan Creek OHV Campground, Jones Creek Campground, Nehalem Falls Campground, and Morrison Eddy Campground.
Facility Maintenance	Picnic table replacements	Recreation staff, South Fork Crew	Replace 10 picnic table at campgrounds: 5 to be replaced at OHV campgrounds. Location based on highest priority for public safety.
Dispersed Campsite Management	Foss Road Dispersed Sites	Recreation staff	Complete conceptual planning to rehab five existing dispersed campsites and convert them into designated campsites with a fire grate and sign. These sites will replace 5 dispersed sites that have been vacated due to resource damage. (Carryover from FY18)

OHV Trails

Table 7. OHV Trail Projects

Project Type	Project Name	Project Mileage	Work Resources	Project Description
OHV Site Management Planning	Diamond Mill OHV Staging Area Site Management Planning	n/a	OHV Specialist, Recreation staff,	Meet with clubs, users and law enforcement to find solutions to current management issues at Diamond Mill related to large groups, parking lot riding, and safety issues. (Carryover from FY20)
Trail Reroute	Reid's Ridge Reroute	2.8	OHV Specialist, OHV Equipment Operators	Reroute existing OHV trail that was damaged due to timber sale activity. The goal is to move remaining segments of trail off of ridge top and make one, continuous sustainable route on the mid-slope of the hillside.
Trail Reroute	North Tower/Relay Ridge Reroute	3.5	OHV Specialist, OHV Equipment Operators	Currently three unsustainable, fall-line trails converge on the radio towers off of Coast Range Road. Goal for the project is to consolidate the three routes into one sustainable route around the mountain to provide better connectivity of the trail system and eliminating unnecessary routes.
Staging Area Development	Muesial Creek OHV Staging Area	n/a	OHV Specialist, OHV Equipment Operators	Improve existing informal OHV Staging Area on Meusial Creek. Some site grading and sign installation

Non-motorized Trails

Table 8. Non-Motorized Trail Projects

Project Type	Project Name	Project Mileage	Work Resources	Project Description
Trail Reroute and Signage Improvements	Peninsula Trail	0.25	Recreation Staff, South Fork Crew	Reroute an existing section of Peninsula trail and eliminate user created paths. Upgrade existing signage along trail.
Wilson River Trail Maintenance	WRT: Cedar Butte Road to Footbridge Trailhead	5	Recreation staff, Northwest Youth Corps	Contract with Northwest Youth Corps for one week to maintain and rehab a difficult 5 mile section of the Wilson River Trail from Cedar Butte Road to Footbridge Trailhead.
Trail Reroute	Coal Creek Trail Reroute	1.5	Recreation staff, South Fork Crew	Reroute a portion of the Coal Creek Trail to mitigate resource damage and address public safety. (Carryover from 2019)

Trail Maintenance (OHV and Non-motorized)

The district will work with volunteers and South Fork crews to accomplish trail maintenance work on non-motorized and OHV trails. Trail maintenance is done year round through a combination of volunteer, South Fork Crews, OHV Equipment Operators, OHV Specialist and recreation staff efforts. An unmet trail maintenance need will be addressed with a Northwest Youth Corps trail crew.

In FY 2021 the OHV Specialists will continue work on a long term OHV trail system planning project. This will be a basin-by-basin systematic trail planning effort with public involvement, specialist review, and careful route planning. Part of the planning effort will be to identify areas or sub-basins that should have limited or no OHV trails to allow for other recreation activities. This project will develop a snapshot of the desired future condition of the OHV trail system, providing guidance for future AOP projects, and help coordinate on the ground projects with potential timber sale impacts. Having a detailed outline of future projects will also promote continuity through personnel and policy changes.

OHV Specialist will continue with ongoing OHV trail projects associated with active timber sale operations. Work will be done with a focus on long term trail system implementation plan, resource protection, sustainability and public safety. In addition to trail construction projects, the OHV specialist will perform maintenance on an average of 50 miles of trail. This work will range from brush control to trail tread work.

The district will seek to maintain 20.1 miles of non-motorized trails in FY 2020. Annual trail work includes bridge inspection, brushing, grade repair, and removal of wind throw. Trail maintenance may be accomplished through a variety of resources including volunteers, and South Fork Inmate crews depending on staffing and availability.

Volunteer Program and Partnerships

In FY 2021 the Tillamook District will administer a wide variety of volunteer activities including:

- Motorized trail work parties and the annual Single Track OHV Trail Day
- SOLVE Beach & Riverside Cleanup Event
- Trail work parties on non-motorized trails
- Camp Host Program at Jones Creek and Nehalem Falls Campground
- Forest Observers in the Bay City Block

The Tillamook District will seek to develop a volunteer program that will assist recreation staff in locating and addressing trail needs. The intent is to encourage active trail users to report trail conditions, provide general information to other trail users and to document volunteer hours they spend on the trail. These volunteers would be the eyes & ears of the trail system.

Event Management

For FY 2021 Tillamook District will administer or review permits for 12-16 motorized events on the Tillamook State Forest. Events include motorcycle races, 4WD events, dual sport events, and observed motorcycle trials.

The Tillamook District Recreation Unit will process and administer a limited amount of permits for recreation related special uses of State Forest Lands. Special uses include commercial and non-commercial activities such as guide services, filming for advertisements, and trail running events. Special use permits for a 25K, 50k and marathon distance running event, a cross country running camp and two hunting guides are planned for renewal in FY 2021.

Additionally, the Tillamook District will work cooperatively with the Forest Grove District on special use permit administration of the Jeep Jamboree. This national Jeep owner's event was held for the first time in the Tillamook State Forest in June 2015. With the success of the event, it has become an annual OHV event that has a positive economic impact on Tillamook County.

Grants

Tillamook District is not applying for grants in FY21 but will review new opportunities as they become available.

Planning and Partnerships

ODF will continue to partner with local recreation providers through the Tillamook County Wellness Access to Physical Activity Committee.

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 large 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.

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 potential stream enhancement opportunities identified in association with the 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 are associated with the following Timber Sales:

- Coast Bill – Log placement/stream enhancement project on Bill Creek has been reviewed in the field. District will work with the Aquatic and Riparian Specialist, in consultation with ODFW, to implement the work.
- Hembre Falls, Jordan Ridge, South Minich, and Steampot – Potential opportunities may exist. District will work with the Aquatic and Riparian Specialist, in consultation with ODFW, to determine if opportunities are present.

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

- 58.2-miles of road improvement including installing additional cross drain culverts to hydrologically disconnect the roads from streams as possible.
- Reopening fish passage to the upper reaches of Acey Creek in conjunction with ODOT.
- Engineering designs for a future fish passage project on Cedar Creek Rd.

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

Watershed Council & other Partnerships: Tillamook District participates in multiple Watershed Councils. The main councils are Lower Nehalem and Nestucca/Neskowin. The Tillamook Estuaries Partnership (TEP) is also active within the district boundaries. District staff attends meetings throughout the year at Lower Nehalem Watershed Council, provides presentations when requested and participates in workgroups and committees when appropriate. The District ownership is very small in the Nestucca Basin and there have not been recent opportunities to partner on projects. District staff occasionally attends meetings with the Nestucca/Neskowin Watershed Council and provides presentations and information when requested. The district is a member of the technical team for the Lower Nehalem Watershed Council's Cold Water Confluences Project.

The District participates in the Salmon Super Highway (Tillamook-Nestucca Fish Passage). The group has set a goal of establishing fish passage on 95% of the historic available habitat in the Tillamook-Nestucca Sub-basin across multiple landowners. Staff serve on both the executive and technical teams associated with this project.

Additionally, the Tillamook District hosts the post-Trask fish Study, a four-year study that assesses the direct impact of forest harvest on the fish community and the East Fork South Fork Trask Dam Removal Study, which will assess the impacts of the dam removal on the macroinvertebrate community. For more information, please see the Research and Monitoring section, pg. 32.

Land Exchange

None Planned.

Law Enforcement and Public Safety

ODF and the Tillamook County Sheriff's Office (TCSO) partner to maintain three full time forest deputies that are funded through ATV grants (\$150,000) and ODF (\$225,000). Tillamook District staff work closely with the forest deputies and the Forest Grove District staff to facilitate law enforcement activity on the district.

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

Firewood Cutting Program

The primary objective of the District Firewood Cutting Program is to provide a source of firewood from State Forests to the public for personal use. The permit fee for personal firewood cutting is \$20 for two cords. Permits are issued for a period of three weeks. Firewood cutting is allowed all year except for the months of July and August. The District typically sells 475-525 woodcutting permits each year.

Non-Timber Forest Products

Special Forest Products are available on the district commercially and for personal use. Commercial permits vary in price and cover harvest of poles, beargrass, ferns, moss, salal, tree seedlings from ditches or cut-banks, and vine maple.

Collection for Personal Use is allowed without a permit for a variety of products but in small quantities limited per person. The public can get information at the district office of specific use volumes, permit costs, and availability.

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

Districts will assist in a variety of research and monitoring projects in FY21. Examples include:

Swiss Needle Cast Cooperative Studies: (ODF Districts and SNCC)

- Monitoring of SNC disease conditions through periodic measurements.
- Installation of new monitoring plot network to take place of aging Growth Impact Study Plot network in stands 10 to 20 years old.

Post-Trask Study: (ODF, USGS FRESC)

The Trask Watershed Study (TWS) was originally designed to evaluate the downstream effects of upstream forest harvest on stream ecosystems and fish. Annual measures that included fish abundance in selected habitat reaches occurred between 2007 and 2016 (save for the harvest treatment year of 2012). In the Post-Trask study, the sampling period was extended at three of the sample sites used in the TWS (treatment reaches on Pothole Creek and Upper Main and reference reach on Rock Creek) for four additional years (Table 1). The goal of this study is to evaluate the direct effects of timber harvest on two fish communities by harvesting adjacent to a fish-bearing stream. Since the current FPA and FMP forest harvest practices will be used, this study will provide information on the adequacy of current forest harvest regulations in protecting the aquatic environment for both private and state forests.

East Fork South Fork Trask Dam Removal Study

The removal of the dam on the East Fork of the South Fork Trask River (EFSF Trask) provided a unique opportunity to assess the impact on the downstream macroinvertebrate community from the sediment load released from behind a dam. The macroinvertebrate community is used as a “bioindicator of stream health” because the species present reflects the water quality (e.g., sedimentation), physical habitat (e.g., substrate composition), and disturbance regimes of the stream (e.g., extreme droughts or floods).

Impacts of the dam removal on the macroinvertebrate community will be assessed using a before-after-control-impact-paired study design (BACIP). Analysis will employ a variety of statistical tests associated with macroinvertebrate studies in the BACIP context. The fundamental objective will be to detect change in community composition (richness and abundance) downstream of the dam removal relative to upstream and reference sites.

Other Planning Operations

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

The district will maintain supporting information for the Implementation Plan, Land Management Classification System, and Annual Operations Plans for public review. Public involvement will include public review and input on the FY21 Annual Operations Plan and on a minor modification to the Desired Future Condition found in the 2009 Implementation Plan. District personnel will participate in public education opportunities such as assisting the Tillamook Forest Education and Interpretation program, watershed council meetings, recreation planning meetings, school field trips and other public events as the opportunity arises. The district will continue to meet with concerned citizens or groups at the district office, at meetings or in the field. The district is developing a tour opportunities to engage with interested stakeholders on the forest.

The Tillamook Forest Center is located at mile post 22 on the Wilson River Highway. Typical activities on-site during FY21 will include: routine maintenance of the building and grounds; guided and self-guided public use of the trails including many school groups; access to the river by interpretive trails. The Center hosts more than 50,000 people per year. The Smith Homestead Day Use Area, located ½ mile east of the Center, hosts many school groups, family activities, and other visitors. The Tillamook Forest Center will be closed from the Monday after Thanksgiving in November 2020 through the end of February 2021 and on Mondays and Tuesdays throughout the rest of year because of the limited operational budget.

Administration

During FY21 the district will be transitioning to a new organization. There will be 19 permanent positions whose full-time function is to manage State Forest land on the District and 5 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 2021 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.

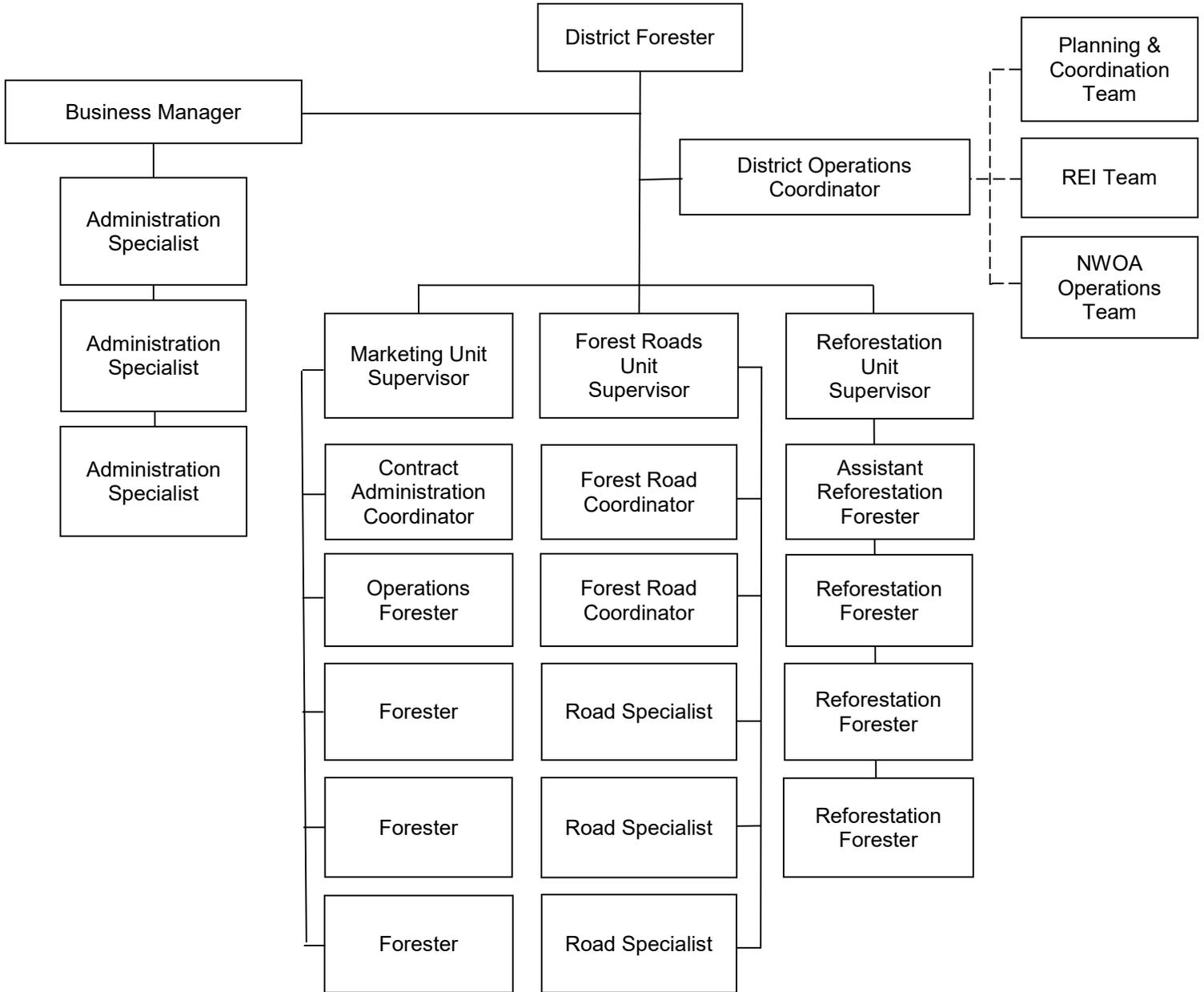
The Forest Roads unit is responsible for all aspects of road management and land surveying. These activities include road design and layout, rock pit development, road maintenance, property line location, road construction and improvement appraisals, contract preparation, and road contract administration. 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.

Administration consists of the District Forester, District Operations Coordinator, District Business Manager, and three Administrative Specialists. The District Forester and District Operations Coordinator provide policy direction, budget development, and oversight to the field units. The Office Manager and three Administrative 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, issuing permits for firewood cutting and special forest products; and issuing log-load ticket books and branding hammers. The district administration staff will support all employees working on the district which includes members of REI Team, Operations Team, and Planning Coordination Team with Duty Station in Tillamook.

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.

Tillamook 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

C. Consultations with Other State Agencies

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

D. Public Involvement

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

E. Pre-Operations Reports

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

F. Forest Land Management Classification

G. District Implementation Plan Minor Modification – Landscape Design

Appendix A

Summary Tables

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

TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: Tillamook

Fiscal Year: 2021

Date: 06/22/2020

Primary Operation	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
	BOF	CSL			Partial Cut	Clear-cut	Conifer	Hardwoods	Total	Gross	Projects	Net
Clarence Creek (175)	100%	0%	Tillamook	1	0	115	1.5	0.3	1.8	\$579,600	\$89,590	\$490,010
Coast Bill (93/94/104)	100%	0%	Tillamook	3	0	333	6.4	0.7	7.1	\$2,334,750	\$724,258	\$1,610,492
Cruiser Creek (516/521)	100%	0%	TILL 88%/WA 12%	2	0	229	6.6	0.5	7.1	\$2,474,850	\$294,630	\$2,180,220
Eastern Moon (769)	100%	0%	Tillamook	1	0	25	1.0	0.1	1.1	\$429,275	\$21,720	\$407,555
Hembre Falls (507/560/853)	100%	0%	Tillamook	2	0	279	5.0	1.1	6.1	\$1,876,720	\$488,845	\$1,387,875
Smith & Archers (325/346/616)	100%	0%	TILL 85%/WA 15%	1	0	288	8.6	1.6	10.2	\$3,730,960	\$560,974	\$3,169,986
South Minich (764)	100%	0%	Tillamook	3	0	118	2.2	0.2	2.4	\$732,900	\$87,500	\$645,400
Steampot (589/594/880)	100%	0%	Tillamook	4	0	331	7.5	0.4	7.9	\$2,780,400	\$496,500	\$2,283,900
Thundercat (839)	100%	0%	Tillamook	4	0	110	2.2	0.4	2.6	\$894,173	\$45,244	\$848,929
Sub-total:					0	1,828	41.0	5.3	46.3	\$15,833,628	\$2,809,261	\$13,024,367
Project WOC Sub-total:					0	0	0.0	0.0	0.0	\$0	\$390,000	\$0
Total:					0	1,828	41.0	5.3	46.3	\$15,833,628	\$3,199,261	\$12,634,367

Alternate Operations

Jordan Ridge	100%	0%	Tillamook		0	295	7.1	0.5	7.6	\$2,482,675	\$654,893	\$1,827,782
Power Range	100%	0%	Tillamook		0	565	10.4	2.0	12.4	\$3,421,550	\$1,218,568	\$2,202,982
Total:					0	860	17.5	2.5	20.0	\$5,904,225	\$1,873,461	\$4,030,764

PRIMARY HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

District: Tillamook

Fiscal Year 2021

Date: 06/17/2020

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	Landscape Design LYR/OFS ³	Install/Replace Culverts on Fish Bearing / Perennial Streams	Harvesting within 100' of Fish Bearing Stream	Domestic Water Source	Potential Stream Habitat Improvement ⁴	Within Aquatic Anchor	Within Terrestrial Anchor	Operating within a NSO Provincial Circle (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
Clarence Creek		-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	Progeny site adjacent to harvest area.
Coast Bill		-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	X	X	-	-	"County Land Use Resolution" (Fund 54) lands in sale area.
Cruiser Creek		-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	X	-	-	-	
Eastern Moon		-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	
Hembre Falls		-	-	-	-	-	-	-	X	-	-	-	-	-	X	X	X	-	X	X	
Smith and Archer's		-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-	X	-	X	Old COPE Study, portion WA Cnty
South Minich		-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	-	-	
Thundercat		-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	X	X	X	-	

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

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

³ A 'x' 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 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.

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 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
Power Range		-	-	-	-	-	-	X	-	-	-	-	-	-	X	X	X	X	X	X	Multiple structures/Hwy 6 will need public safety analysis
Jordan Ridge		-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	X	X	-	-	
Steampot		-	-	-	-	-	-	-	X	X	-	-	-	-	X	-	X	X	X	-	Unit 589 will need to be accessed via Weyerhaeuser lands.

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: Tillamook

Fiscal Year: 2021

Date: 06/22/2020

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					
Clarence Creek	0.60	\$20,875	1.20	\$64,641	\$4,074	\$89,590	\$579,600	15.5%	
Coast Bill	3.47	\$469,856	10.77	\$44,983	\$209,420	\$724,258	\$2,334,750	31.0%	
Cruiser Creek	2.44	\$141,405	22.46	\$50,465	\$102,761	\$294,630	\$2,474,850	11.9%	
Eastern Moon	0.45	\$18,714	0.00	\$0	\$3,006	\$21,720	\$429,275	5.1%	
Hembre Falls	1.37	\$264,834	1.45	\$201,137	\$22,875	\$488,845	\$1,876,720	26.0%	
South Minich	0.23	\$18,029	2.60	\$14,413	\$55,058	\$87,500	\$732,900	11.9%	
Smith & Archers	2.0	\$154,224	8.8	\$263,785	\$142,965	\$560,974	\$3,730,960	15%	
Steampot	0.25	\$11,082	13.70	\$409,835	\$75,583	\$496,500	\$2,780,400	17.9%	
Thundercat	0.16	\$9,748	1.34	\$32,642	\$2,854	\$45,244	\$894,173	5.1%	
Sub-total	11.0	\$1,108,765	62.3	\$1,081,900	\$618,596	\$2,809,261	\$15,833,628	17.7%	
Sub-total WOC (see below)	0.0	\$0	0.0	\$0	\$390,000	\$390,000	\$0		
Totals	11.0	\$1,108,765	62.3	\$1,081,900	\$1,008,596	\$3,199,261	\$15,833,628	20.2%	

Alternate Operations

Power Range	5.95	\$353,265	11.86	\$177,464	\$687,839	\$1,218,568	\$3,421,550	35.6%	
Jordan Ridge	3.55	\$359,842	16.79	\$262,921	\$32,130	\$654,893	\$2,482,675	26.4%	
Total	9.5	\$713,107	28.7	\$440,385	\$719,969	\$1,873,461	\$5,904,225	31.7%	

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				
Clarence Minich Land Survey				\$73,000	\$73,000	FD	WOC
Tillamook Culverts #1				\$100,000	\$100,000	FD	WOC
Cedar Creek Engineering #1				\$25,000	\$25,000	FD	WOC
FG 7 Cedars Rock Crushing				\$90,000	\$90,000	FD	WOC
Cook Creek Engineering				\$90,000	\$90,000	FD	FEMA
Tillamook Brushing				\$12,000	\$12,000	FD	WOC
Acey Creek Culvert Vacate						ODOT	ODOT
Total	0.00	\$0	0.00	\$390,000	\$390,000		

REFORESTATION AND YOUNG STAND MANAGEMENT SUMMARY

District: Tillamook

Fiscal Year: 2021

Date: 01/23/2020

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	3,727	\$179.51	\$669,033.77	23	\$179.51	\$4,128.73	3,750	\$673,162.50
Site Prep - Broadcast Burning			\$0.00			\$0.00	0	\$0.00
Site Prep - Piling Burning	3,977	\$3.96	\$15,748.92	23	\$5.00	\$115.00	4,000	\$15,863.92
Site Prep - Mechanical			\$0.00			\$0.00	0	\$0.00
Site Prep - Chemical - Aerial	3,227	\$53.88	\$173,870.76	23	\$53.88	\$1,239.24	3,250	\$175,110.00
Site Prep - Chemical - Ground	200	\$119.88	\$23,976.00			\$0.00	200	\$23,976.00
Initial Planting	3,427	\$242.81	\$832,109.87	23	\$242.81	\$5,584.63	3,450	\$837,694.50
Interplanting	300	\$202.78	\$60,834.00			\$0.00	300	\$60,834.00
Underplanting			\$0.00			\$0.00	0	\$0.00
Tree Protection - Barriers	2,956	\$70.00	\$206,920.00			\$0.00	2,956	\$206,920.00
Tree Protection - Direct Control	3,177	\$100.00	\$317,700.00	23	\$89.95	\$2,068.85	3,200	\$319,768.85
Release - Chemical - Aerial			\$0.00			\$0.00	0	\$0.00
Release - Chemical - Ground	1,000	\$100.00	\$100,000.00			\$0.00	1,000	\$100,000.00
Release - Manual	1,000	\$125.00	\$125,000.00			\$0.00	1,000	\$125,000.00
Precommercial Thinning	500	\$150.00	\$75,000.00			\$0.00	500	\$75,000.00
Pruning			\$0.00			\$0.00	0	\$0.00
Stocking Surveys*	4,259		\$0.00			\$0.00	4,259	\$0.00
Invasive Species	100	\$100.00	\$10,000.00			\$0.00	100	\$10,000.00
Roadside Spraying	230	\$105.00	\$24,150.00			\$0.00	230	\$24,150.00
Other (Stocking Surveys)	3,000	\$6.67	\$20,000.00			\$0.00	3,000	\$20,000.00
Totals	31,080	--	\$2,654,343.32	115	--	\$13,136.45	31,195	\$2,667,479.77

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

Projects Conducted by Adults in Custody	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
Site Prep - Broadcast Burning			\$0.00			\$0.00	0	\$0.00
Site Prep - Piling Burning			\$0.00			\$0.00	0	\$0.00
Site Prep - Mechanical			\$0.00			\$0.00	0	\$0.00
Initial Planting			\$0.00			\$0.00	0	\$0.00
Interplanting			\$0.00			\$0.00	0	\$0.00
Underplanting			\$0.00			\$0.00	0	\$0.00
Tree Protection - Barriers	1,944	\$108.20	\$210,340.80			\$0.00	1,944	\$210,340.80
Tree Protection - Direct Control	300	\$111.37	\$33,411.00			\$0.00	300	\$33,411.00
Release - Manual	100	\$119.40	\$11,940.00			\$0.00	100	\$11,940.00
Precommercial Thinning			\$0.00			\$0.00	0	\$0.00
Pruning			\$0.00			\$0.00	0	\$0.00
Invasive Species			\$0.00			\$0.00	0	\$0.00
Other (Tree Packing)	2,650	\$48.00	\$127,200.00			\$0.00	2,650	\$127,200.00
Totals	4,994	--	\$382,891.80	0	--	\$0.00	4,994	\$382,891.80

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

RECREATION SITE MANAGEMENT SUMMARY

District: Tillamook

Fiscal Year: 2021

Date : 01/23/2020

Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Campgrounds								
Diamond Mill						\$4,076	\$4,076	trash, septic pumping (ATV Transfer Fund)
Jones Creek					\$17,640		\$17,640	trash, septic pumping, electricity
Keenig					\$3,969		\$3,969	trash, septic pumping
Jordan Creek						\$2,867	\$2,867	trash, septic pumping (ATV Transfer Fund)
Nehalem Falls					\$4,410		\$4,410	trash, spetic pumping, phone, electricity
Morrison Eddy					\$1,323		\$1,323	trash, septic pumping
Designated Dispersed Campsites								
North Fork Wilson					\$2,315		\$2,315	portable toilet
Cedar Creek					\$3,858		\$3,858	trash, 2 portable toilets
Jordan Creek					\$115		\$115	signs, posts, fire grate maintenance
North Fork Trask					\$58		\$58	signs, posts, fire grate maintenance
East Fork Trask					\$115		\$115	signs, posts, fire grate maintenance
South Fork Trask					\$2,315		\$2,315	portable toilet, signs, posts
Cook Creek					\$115		\$115	signs, posts, fire grate maintenance
Day Use Areas								
Stones Road Boat Launch					\$58		\$58	sign maintenance
Beaverslide Boat Launch					\$58		\$58	sign maintenance
Jones Creek Day Use Area					\$4,300		\$4,300	trash, septic pumping
Trailheads								
Cedar Creek OHV Staging Area						\$5,512	\$5,512	trash, septic pumping (ATV Transfer Fund)
Footbridge Trailhead					\$3,418		\$3,418	trash. Septic pumping
Hollywood OHV Staging Area					\$58		\$58	signs, posts, fire grate maintenance
Equestrian Trailhead					\$115		\$115	signs maintenance
Penninsula Trailhead & Boat Launch					\$115		\$115	posts, signs, table maintenance
Interpretive Sites								
Sprague Wayside					\$2,425		\$2,425	septic pumping, electricity
Other Operations								
Dust Abatement					\$4,960		\$4,960	Jones Creek, Nehalem Falls

Field Services & Supplies					\$28,665	\$28,665	lumber, concrete, hardware, paint, signs, camp host propane & fuel, garbage bags, well pump service, crushed rock, office supplies, contracted work for resource protection/blocking, all field related services.	
Replacement Picnic Tables					\$3,375	\$3,375	\$6,750	10 picnic tables @ \$675 each (ATV Transfer Fund)
Garbage Service at District					\$3,858		\$3,858	
Fee Envelopes					\$1,754		\$1,754	
Water Testing					\$1,990		\$1,990	Quarterly water tests, annaul nitrite test, required sanitation surveys and annual well fee of \$150 for wells at Jones Creek, Keenig & Nehalem Falls Campground.
Field Supplies OHV						\$1,425	\$1,425	hoses, parts, tires (ATV Transfer Fund)
Bridge Inspections					\$2,325		\$2,325	Yearly contract for bridge inspections
Spray Contract					\$3,500		\$3,500	Contracted spraying at recreation sites
					District Total		\$97,207	
					Other Total		\$17,255	
					TOTAL		\$114,462	

*A portion of the motorized recreation costs are funded through OPRD transfer funds.

** All Maintenance Work to be performed by South Fork and ODF Staff

RECREATION TRAIL MANAGEMENT SUMMARY

District: Tillamook

Fiscal Year: 2021

Date : 01/23/2020

Project	Construction Projects			Improvement Projects			Operations & Maintenance Projects			Total Costs	Comments
	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)		
Non-Motorized											
Peninsula Trail Reroute							0.3	\$1,921		\$1,921	2 South Fork crew days at \$960.60 per day
Wilson River Trail							5.0	\$9,000		\$9,000	Contract with Northwest Youth Corps for one week to maintain and rehab a difficult 5 mile section of the Wilson River Trail from Cedar Butte Road to Footbridge Trailhead.
Coal Creek Trail							1.5	\$3,842		\$3,842	4 South Fork crew days at \$960.60 per day
Motorized											
OHV Trail Brushing							10.0	\$7,685		\$7,685	8 South Fork crew days at \$960.60 per
										District Total	\$22,448
										Other Total	\$0
										TOTAL	\$22,448

*A portion of the motorized recreation costs are funded through OPRD transfer funds.

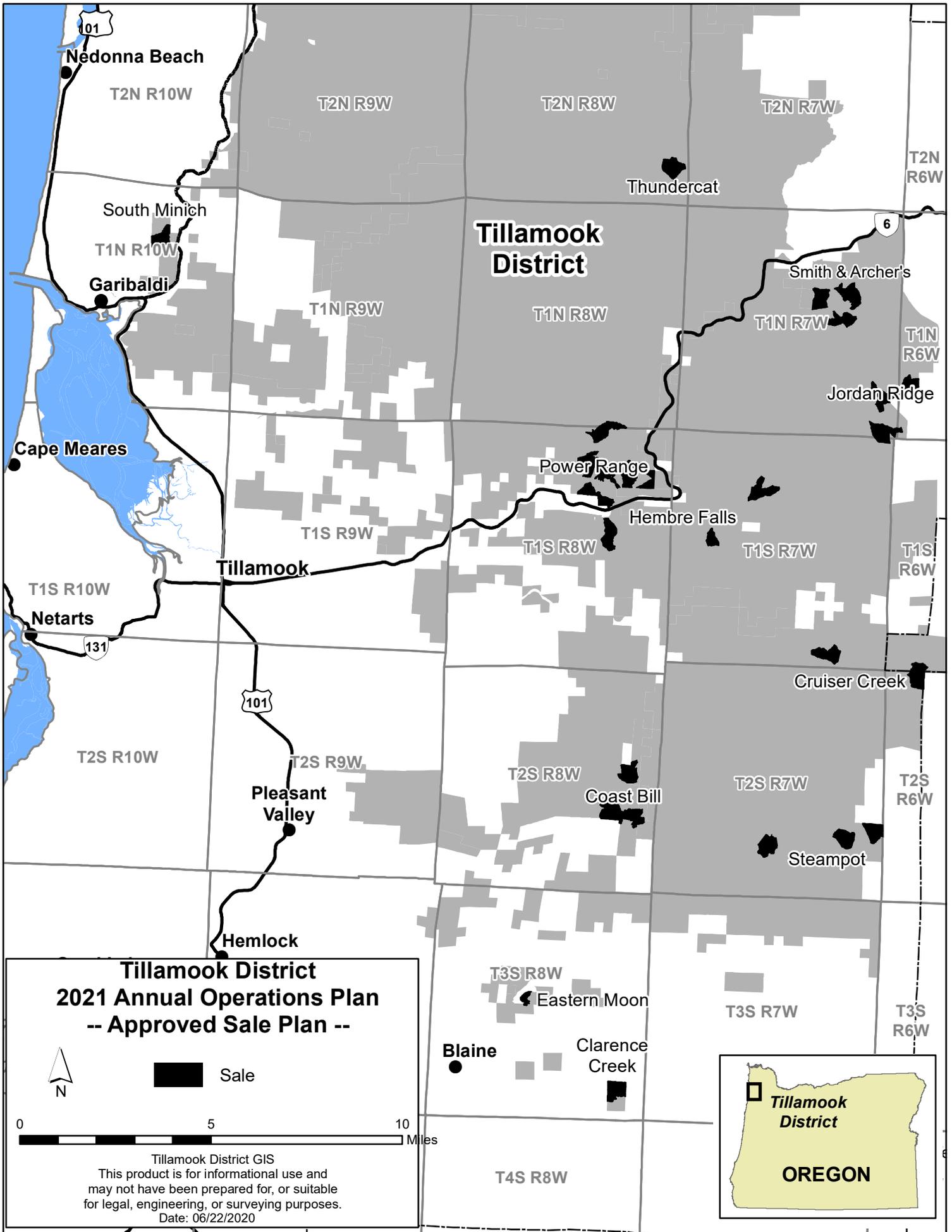
RECREATION GRANT MANAGEMENT SUMMARY

District: Tillamook

Fiscal Year: 2021

Date : 02/13/2021

Grant	Status	Award Date (actual or anticipated)	Recreation Leadership Approval	Goals/Purpose	Funding		Project Total	Comments
					Grant (\$)	Match (\$)		
					\$0	\$0	\$0	
					Grants Total		\$0	
					Match Total		\$0	
					TOTAL		\$0	



**Tillamook District
2021 Annual Operations Plan
-- Approved Sale Plan --**



■ Sale

0 5 10 Miles

Tillamook District GIS
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for legal, engineering, or surveying purposes.
Date: 06/22/2020



**Tillamook
District**
OREGON

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 culverts within the sale areas 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 any cultural artifacts are present:

- Trails, House site: Hembre Falls
- Trails: Steampot
- Cabin site: Thundercat
- Trail: Power Range

Appendix D

Public Involvement and Summary of Changes

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, 2020 through May 6, 2020.

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

The following changes have been made to the Tillamook District FY21AOP since the Public Comment period:

- Harvest boundaries for two sale areas were updated to incorporate additional no harvest (buffer) areas recommended by the Geotechnical Specialist. The *Hembre Falls* sale decreased in acreage, from 284 acres to 279. Volume for the sale went from 6.2 MMBF to 6.1. The *Coast Bill* sale decreased in acreage, from 337 acres to 334. Volume for the sale remained the same.
- Harvest boundaries for three sale areas were updated to reflect the final, prepared boundaries, as posted in the field. The Clarence Creek sale decreased in acreage, from 118 acres to 115. Volume for the sale decreased from 1.9 MMBF to 1.8. The *Smith N Archer's* sale decreased in acreage, from 309 acres to 288. Volume for the sale decreased from 11.0 MMBF to 10.2. The *Cruiser Creek* sale decreased in acreage, from 240 acres to 229. Actual cruised volume was higher than was estimated. Volume for the sale increased from 5.3 MMBF to 7.1.
- The *Clay Corner* sale was dropped from the FY21 sale plan and Steampot, previously an alternate, was moved to primary status in its place.

Public comments and the responses are available upon request.

Appendix E

Pre-Operations Report

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

<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

Forest Land Management Classification System (FLMCS) Modification Notification

No modifications are proposed for the FY21 AOP.

Appendix G

Landscape Design – Tillamook District Implementation Plan Minor Modification Notice

As described in the 2009 District IP, the district has mapped a Landscape Design that designates 40% 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 Tillamook District's landscape design. The DFC landscape design for the Tillamook district was done using a "broad brush" method incorporating a variety of landscape design principles and strategies. The original Landscape Design mapping process used stand types instead of geographical breaks to define the future complex stand boundaries with the intent that the boundaries could be fine-tuned during the planning process. Actual boundaries between complex and general DFC's are determined on the ground during the sale planning and preparation process. Minor changes in the DFC landscape design may occur on an annual basis due to a variety of reasons. These reasons may include; refinement of the DFC boundary on the ground, forest health issues, and fitting a stand to a more appropriate or realistic pathway based on additional data collected through Stand Level Inventory (SLI) and field observations during the AOP planning process. Changes of up to 240 acres annually are considered minor changes and can be approved by the District Forest concurrent with the Annual Operation Planning process.

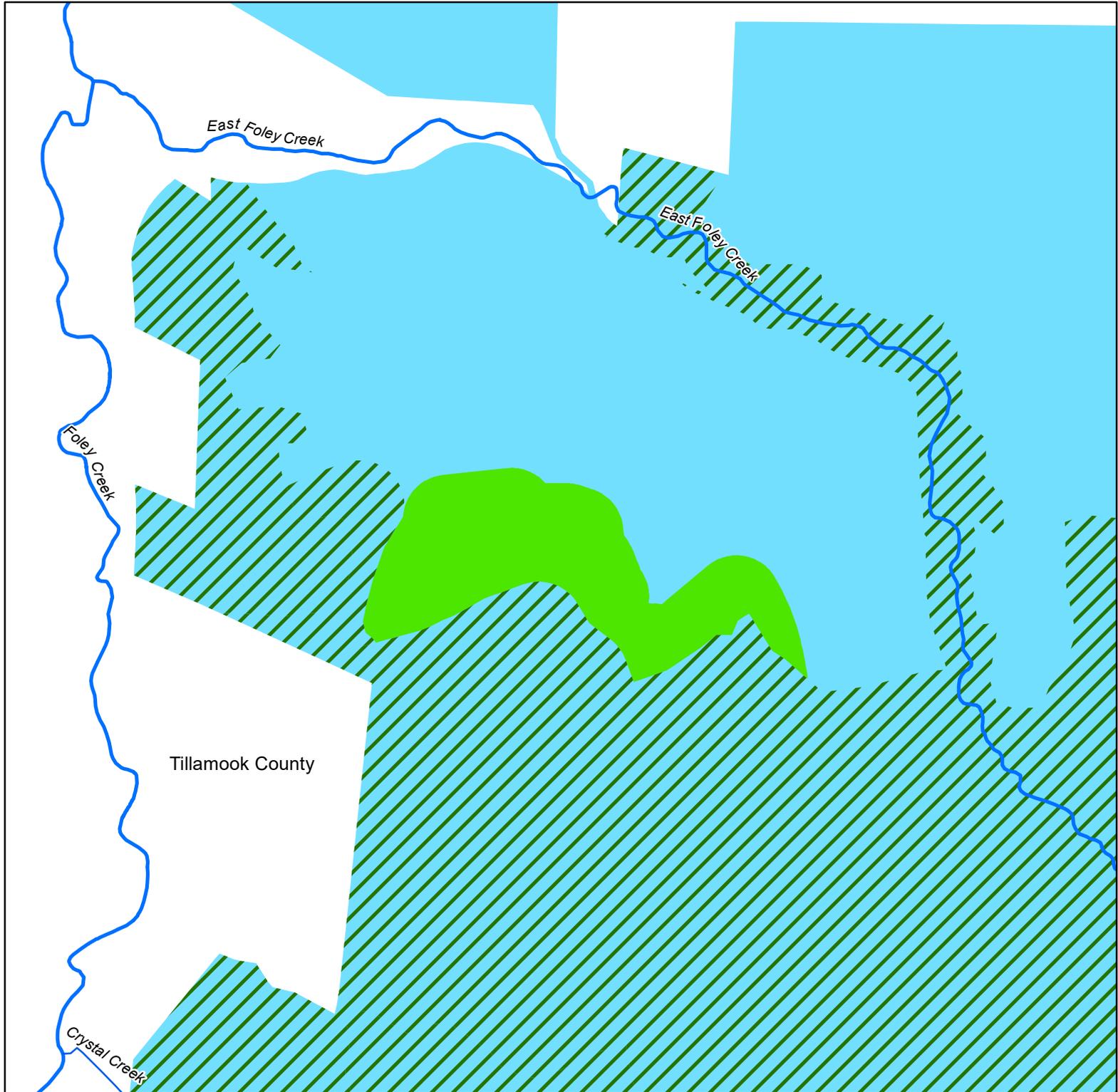
Description of change: The district is proposing to change 77 acres that have a current DFC of Layered and 2 acres that have a current DFC of Older Forest Structure to non-complex or "general". The 77 acre patch is predominantly comprised of red alder and is being removed to create an operational timber sale boundary for FY22 and to provide an opportunity to relocate these acres to a more appropriate location. The 2 acre patch is being changed to accommodate an operational boundary change for a FY20 timber sale. These areas were reviewed by the area biologist and the District's Marketing Unit Forester.

The District intends to add 102 acres from DFC of non-complex to Layered and 56 acres to move to Older Forest Structure. These acres include mixed species stands of varying age and are located in multiple locations including: an existing TAS (Miami), a new MMMA (Foley Creek), and in a Deed restricted area ("County Resolution"/Fund 54 acres). These new complex designations will expand upon areas that already have a DFC of complex structure. (See maps below).

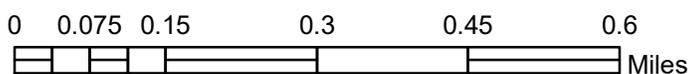
The designation of DFC complex on the Tillamook District remains at 40%.

Summary of Minor Landscape Design Modification			
Acres Removed		Acres Added	
Desired Future Condition	Acres	Desired Future Condition	Acres
LYR	77	LYR	102
OFS	2	OFS	56
Total Acres Removed	79	Total Acres Added	158

Tillamook District Landscape Design - Desired Future Condition Revision



- Large Stream
- Medium Stream
- Current DFC Complex
- Change From DFC Non-Complex to Complex
- Change From DFC Complex to Non-Complex
- State Forest Land

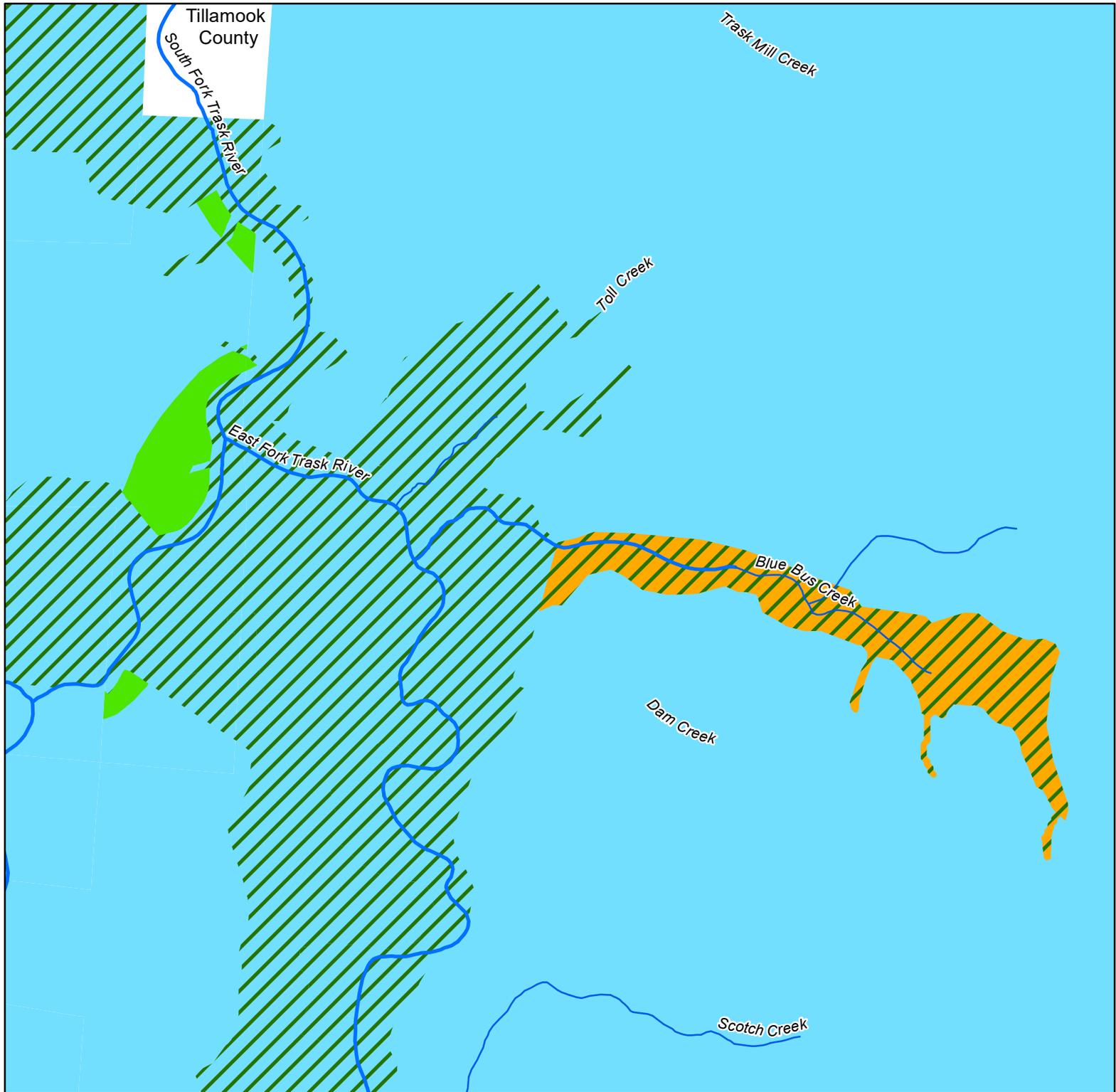


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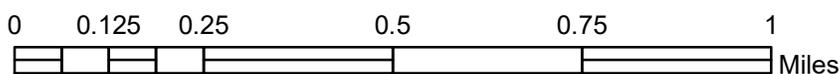
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Date: 02/27/2020

Tillamook District Landscape Design - Desired Future Condition Revision



- Large Stream
- Medium Stream
- Current DFC Complex
- Change From DFC Non-Complex to Complex
- Change From DFC Complex to Non-Complex
- State Forest Land

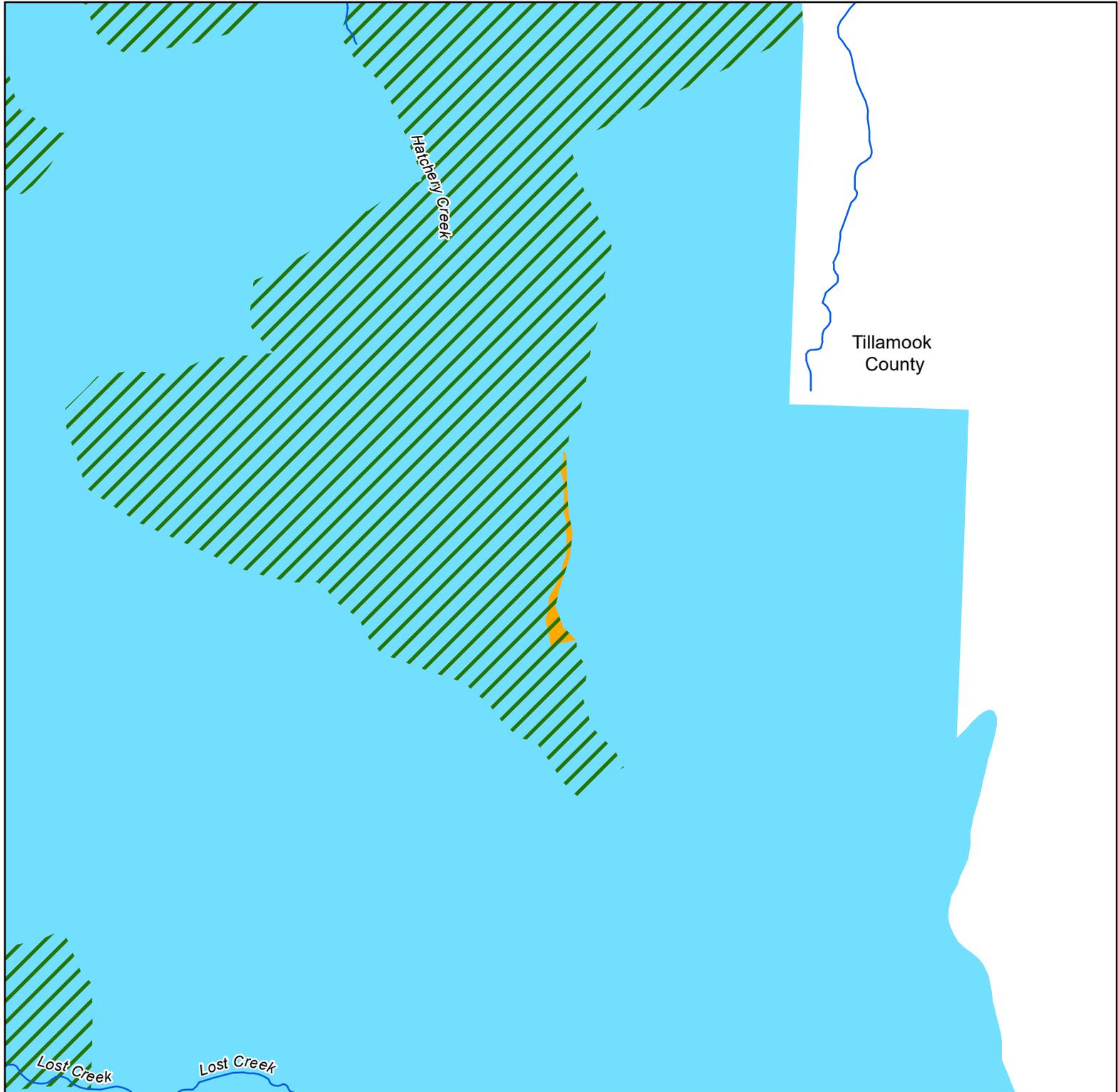


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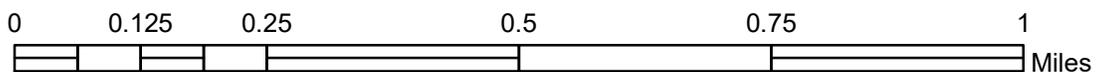
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Date: 02/27/2020

Tillamook District Landscape Design - Desired Future Condition Revision



- Large Stream
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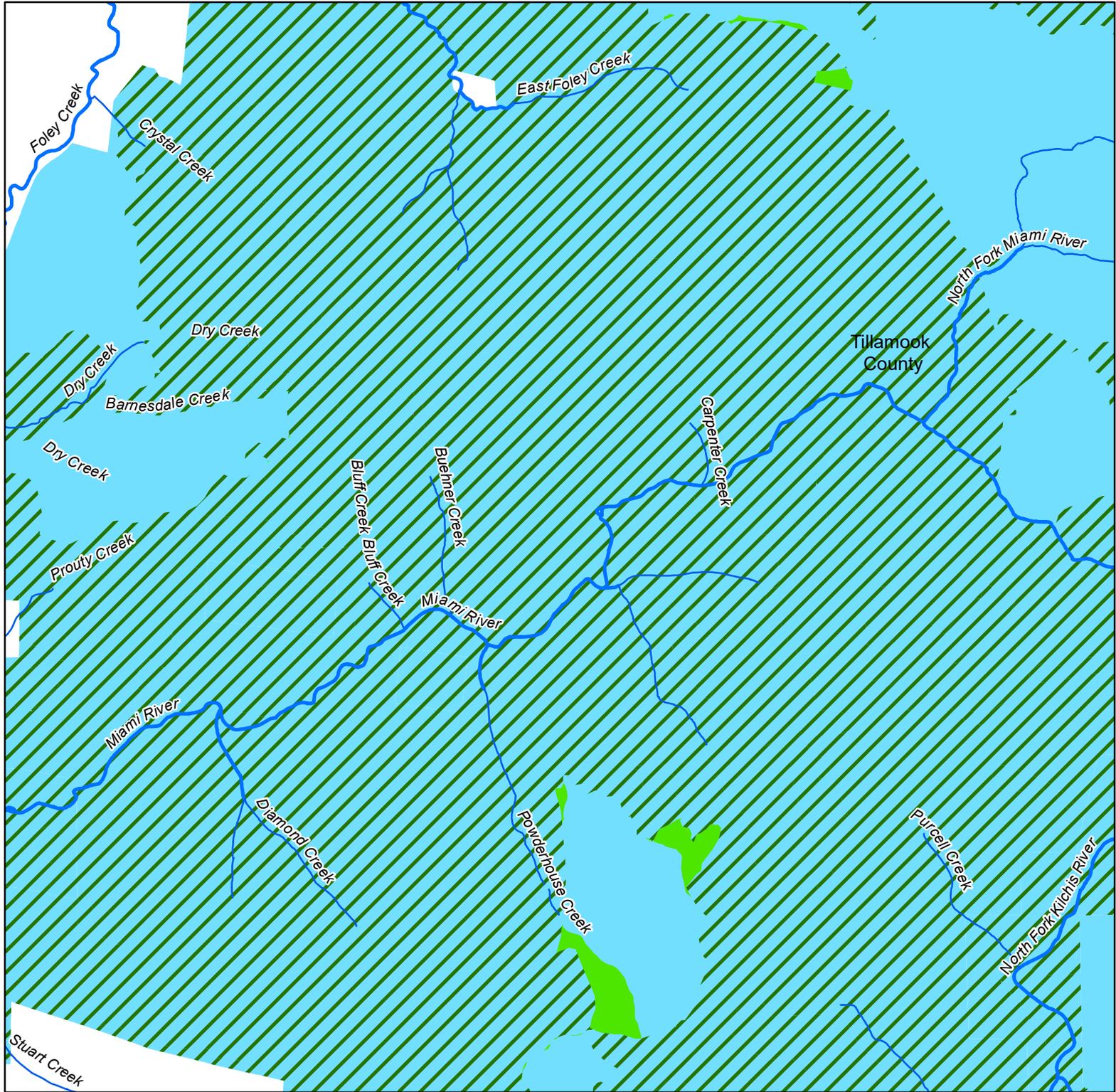


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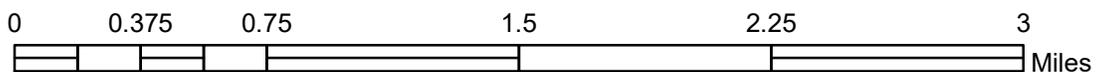
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Date: 02/27/2020

Tillamook District Landscape Design - Desired Future Condition Revision



- | | |
|---|--|
|  Large Stream |  Change From DFC Non-Complex to Complex |
|  Medium Stream |  Change From DFC Complex to Non-Complex |
|  Current DFC Complex |  State Forest Land |



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