

**FOREST GROVE
DISTRICT
2018 ANNUAL
OPERATIONS PLAN**



FOREST GROVE DISTRICT

2018 ANNUAL OPERATIONS PLAN

OVERVIEW

This plan describes the activities and outcomes that Oregonians can expect to see on the eastern side of the Tillamook State Forest for 2018. We welcome your comments, and will use them to improve this plan within the scope of the Department's authority, in alignment with the longer term overarching plans, and bounded by budgets and staff resources.

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

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

Managing a large public forest has its challenges. In addition to the challenges of providing the opportunities described above, the forest is expected to be financially self-supporting. About two-thirds of the revenues from state forest timber sales go to local counties and other taxing districts, including schools. ODF uses the remaining third of the revenue to manage the forests and keep them healthy, through activities including fire protection, tree planting, thinning, research and monitoring, recreation services, road maintenance and stream improvement. Current financial constraints are currently limiting many activities and you will see this theme throughout the year's plan. We are striving to continue to provide the current opportunities, and are considering a few opportunities for change.

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

This 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, the US Fish and Wildlife Service, motorized and non-motorized recreation users, hunters, fishermen, and wildlife advocates, as well as Oregonians in general.

A short summary of activities planned for the coming year:

- Planting 550,000 trees on 1,295 acres and conducting vegetation and animal management activities on an additional 3,519 acres to ensure the survival and growth of these plantations.
- Conducting density surveys for northern spotted owls covering the majority of the district and surveying 10 miles of streams for the presence of fish.
- 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 no streams near the planned harvest units could benefit from large wood additions to the stream system.
- Habitat development projects such as creating snags by removing the tops (550 planned this year), retaining green trees in clearcut areas, and leaving down wood, all for wildlife benefits in harvest areas and future forests.
- Maintaining 776 miles of road and improving approximately 22.5 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 irresponsible target shooting.
- Beginning the planning cycle to harvest approximately 61 million board feet of timber volume, through modified clearcut and partial cut harvest, generating revenue of an estimated \$31.8 Million in appraised value. This harvest level is in alignment with longer term plans and modeling to ensure it is sustainable and promotes the development of a mixture of habitat types across the landscape.
- Operating and maintaining the following developed facilities in a safe, clean, and responsible manner:
 - 5 campgrounds
 - 2 day use picnic areas
 - 2 highway wayside interpretive sites
 - 12 trailhead facilities
- Providing a safe and clean environment for the myriad of dispersed activities that occur across the forest – hunting, camping, angling, sight-seeing, target shooting, swimming, mushroom picking, etc.

- Maintaining, managing, and patrolling the 82 miles of motorized and 63 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 Trail Patrol
 - Forest Clean-up
 - Trail Maintenance and Construction Work Parties
 - OHV Trail Equipment Volunteer Operator
- Supporting the pre-planned 8 to 10 organized motorized events and providing support for 2 non-motorized events. Evaluate new event proposals for fit with forest goals.
- Supporting the planning effort on the Salmonberry Rail and Trail project, the opportunity to convert the damaged Tillamook to Banks railroad line into a rail line for portions and a recreational trail throughout its length.
- Providing a firewood cutting program and miscellaneous forest products permits (salal, mushrooms, etc.) as done in 2016.
- Supporting ongoing research on the district, in partnership with research cooperatives and universities.

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INTRODUCTION

This annual operations plan (AOP) outlines state-owned forestland managed by the Forest Grove District for Fiscal Year 2018 (FY18), which begins July 1, 2017 and ends June 30, 2018. This document describes how the activities and projects undertaken by the district will achieve the goals, strategies, and objectives of the *NW Oregon Forest Management Plan (FMP)*, *Tillamook State Forest Recreation Action Plan*, and the *Forest Grove District 2011 Implementation Plan (IP)*. Please refer to the district IP for more specific information on physical characteristics and other district resource information.

The AOP document is divided into five major categories: Integrated Forest Management; Planning and Information Systems; Public Information and Education; Administration and Appendices. A short summary of proposed activities are listed within this introduction. In addition to describing forest management activities for FY 2018, Appendix F of this AOP also describes *major changes** to the State Forests' Forest Land Management Classification maps. These changes have been reviewed and approved by the State Forester.

The proposed harvest operations and activities are planned to be designed, engineered, and submitted for processing during the FY18 time period. Actual on-the-ground operations will likely not occur during FY18 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 FY2018.

A 45-day public comment period was held from March 20, 2017 through May 4, 2017. The District Forester reviewed the comments received during this period prior to approving this plan. Minor changes made prior to approving the AOP are posted in Appendix D.

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

*Major changes and the procedures for making these changes are described in Forest Grove IP.

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

INTEGRATED FOREST MANAGEMENT OPERATIONS

Timber Harvest Operations

Overview of Timber Harvest Operations

The FY18 AOP is estimated to produce 61 million board feet in volume, generate gross revenues of approximately \$33,451,597 and net revenues of \$31,794,947 in appraised value. The planned commercial forest management activities are in alignment with the guidelines and objectives outlined in the Forest Grove District’s 2011 Implementation Plan (IP). The goal is to maintain an average harvest level of 61 MMBF for the duration of the current IP. Refer to the attached Financial Summary Table (Appendix A, Table A-1) and vicinity map (Appendix B) for more detail.

All of the Primary and Alternate harvest operations and many of the other forest management activities have been reviewed by ODF’s wildlife biologists, aquatic specialist, geotechnical engineer, road engineer, and operations coordinator, as well as fish and wildlife biologists from the Oregon Department of Fish and Wildlife and archeologists from Oregon Department of Transportation. Occasionally, operations may contain a resource or activity where review with another state agency, such as the Department of Agriculture or the Department of State Lands, is warranted. Written comments from the external resource specialists and the resolution of those comments can be found in Appendix C.

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

Silvicultural Activity	IP Annual Objective		2018 AOP Objective
	Low	High	
Partial Cut Harvest	0	2,100	153
Regeneration Harvest	500	2,000	1,305

Table 1 shows the proposed acres by harvest type. The 1,305 acres of regeneration harvest planned for FY18 represents one percent of the district. One hundred percent of the regeneration harvest acres will be designed as modified clearcuts. The 153 acres of partial cut are planned for a light partial cut. 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, while a vicinity map of these harvest operations can be found in Appendix B.

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

Fiscal Year	IP Annual Objective	AOP Planned Volume	AOP Sold Volume	Cumulative Difference from Objective ¹
FY 12	61	59.0	61.2	0.2
FY 13	61	65.8	63.0	2.2
FY 14	61	59.0	63.4	4.6
FY 15	61	56.6	64.9	8.5
FY16	61	58.1	57.7	5.2
FY 17 (Current AOP) ²	61	56.1	39	
FY 18 (Draft AOP)	61			

1. IP Harvest Objective versus Sold Volume

2. Estimated Volume based on completion (prepared and sold volume) of 64% of the planned volume from the current AOP

Overview of Structural Components

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

The green tree retention target for regeneration harvest units is five trees per acre. Green tree arrangements for this AOP include; scattered individual trees, clumps of trees, and trees concentrated in and adjacent to riparian management areas.

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

In 1992 the district began to incorporate tree topping in our timber sale contracts. Since that time there have been thousands of trees topped to create hard snags on the Forest Grove district. The FMP strategy for hard snags is to manage for at least two per acre on average across the landscape. The need for snag creation for regeneration sales is evaluated on a sale by sale basis. The wind events of 12/06, 11/07, & 12/07 and the snow/ice event of 1/17 made significant contributions to snag and DWD levels despite the salvage of some large concentrations of blow down. This in turn led to scattered bark beetle outbreaks resulting in additional tree mortality during 2009. The majority of beetle caused mortality is located within the McGregor, Wheeler, and Upper Salmonberry Basins. Minor amounts were observed in Larch Mtn., Gales Creek, and Roger's Basins. Based on these observations, snag creation will only be required on planned sales in the Sunday Creek Basin, Wilark Basin, Scoggins Basin, and portions of Gales Creek and Roger's Basins. A total of 550 manmade snags greater than 15 inches in diameter will be created with this AOP.

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

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

Within a given annual operations plan, snags and DWD may be retained at higher levels in some units and at lower levels in other units, with the intent of achieving the landscape targets outlined in the Forest Management Plan strategies. The estimates used in the pre-operation reports for existing snags and DWD are based on our inventory for the sale area or on the basin average when not available for the sale area. The estimates for post-harvest expectations are based on contract requirements, monitoring results, and SLI data from the previous ten years of regeneration harvests. Stand Level Inventory data collected on sales harvested over the past 10 years show an average of 665 cubic feet per acre of Class 1 and 2 DWD for regeneration harvest units, and 605 cubic feet per acre of Class 1 and 2 DWD for partial cut units. These post-harvest DWD results can be attributed to natural recruitment from green tree retention, residual logging slash, and tree topping. A total of 987,750 cubic feet of sound down wood will be added to the forest as part of the FY 18 AOP.

Harvest Operations within Terrestrial Anchor Sites and Aquatic Anchors

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

- Terrestrial Anchor Sites (TAS) areas are intended to benefit terrestrial wildlife species of concern, especially those associated with older forest or interior habitat conditions, sensitive to forest fragmentation, or do not readily disperse across younger forest conditions. Management within TAS is intended to be limited, to emulate natural small-scale disturbance patterns, and to minimize short-term negative impacts to habitat. All areas that were designated as TAS were designated for the development of complex structure in the Landscape Design.

- Aquatic Anchor (AA) sites are watersheds where salmon and aquatic amphibian conservation is of concern. Riparian management strategies beyond those described in the FMP will be applied within AAs. In addition, areas designated for the development of complex structure in the Landscape Design are clustered around streams important to fish in the AA.

The Species of Concern Strategies provide long term goals for TAS and AA. The management activities within those areas are designed to achieve those goals. These strategies have not identified specific limits to the total area that can be harvested within these areas; however, the district and resource specialist will be tracking the harvest trends within these areas to ensure the harvest prescriptions and rate is consistent with the goals of these strategies.

Terrestrial Anchor Sites

Since the adoption of the TAS in the July 2011, the district has been proceeding with operations in these areas. Great care has been given in selecting stands for harvest and developing prescriptions in these areas to ensure that these harvest activities achieve the goals of the TAS. These sales were reviewed with ODF and ODFW Resource Specialists. Table 3 shows there is one harvest operation within the TAS proposed in the 2018 AOP and also shows the cumulative operations in TAS since the strategy was adopted (AOPs 2012 through 2018). Partial cuts have occurred within the Upper Salmonberry and Wolf Creek TAS in previous fiscal years.

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

Acres within TAS	Current AOP (FY 2018)		Cumulative Harvest (Since FY 2012)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
AOP Acres	1,305	153	7,964	6,204
% of District Acres	1%	0.1%	5.8%	5.5%
South Fork Wilson (2,081 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Upper Salmonberry (3,097 ac)	0	0	0	373
% of Acres	0%	0%	0%	12%
Wolf Creek (4,203 ac)	0	153	0	656
% of Acres	0%	3.6%	0%	15.6%
All TAS (9,381 ac)	0	153	0	879
% of Acres	0%	1.6%	0%	11%

Aquatic Anchors

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

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

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

Acreages	Current AOP (FY 2018)		Cumulative Harvest (since FY 2014)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
AOP Acres	1,305	153	5,879	3,386
% of District Acres	0%	0%	5%	3%
Aquatic Anchor (AA) Basins				
Ben Smith Creek (2,410 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Devils Lake Fork Wilson River (6,132 ac)	0	0	308	118
% of Acres	0%	0%	5%	2%
Elkhorn Creek (1,049 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
Lousignont Creek/Upper Nehalem River (12,355 ac)	153	0	951	1,417
% of Acres	1.2%	0%	7.7%	11.5%
S. Fork Salmonberry River (5,659 ac)	0	0	86	260
% of Acres	0%	0%	1.5%	4.6%
Upper Rock Creek (3,295 ac)	0	0	0	0
% of Acres	0%	0%	0%	0%
All Aquatic Anchors (30,900 ac)	153	0	773	1,113
% of Acres	0.5%	0%	2.5%	3.6%

Summary of Timber Harvest Operations by Basin

In the following section, the harvest operations planned for FY18 will be summarized in the context of the eleven management basins on the Forest Grove District. ODF and ODFW resource specialists reviewed the FY18 AOP and provided input. Individual pre-operation reports include information regarding riparian protection and structural components such as snags, down wood, and green tree retention. Since the Forest Management Plan strategies provide standards for these components, they are not discussed in the summary. Road concerns 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.

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

Basin	2018 AOP	
	Partial Cut	Clearcut
Bell Mountain	0	0
Isolated Tracts	0	0
Gales Creek	0	156
Larch Mountain	0	203
McGregor	0	189
Rogers	0	0
Scoggins Creek	0	0
Sunday Creek	0	277
Upper Salmonberry	0	214
Wheeler	153	153
Wilark	0	113

Bell Mountain Basin

No harvest operation is planned for this basin.

Isolated Tracts Basin

No harvest operation is planned for this basin.

Gales Creek Basin

Bell Bottom: This is a 3 unit modified clearcut totaling 156 acres. The mixed Douglas-fir stands within the sale are 60 to 70 years-old with salal and ferns in the understory. The current stand condition of the sale is Understory. The Desired Future Condition of the sale is for non-complex stands. Following harvest, the units will be planted with a mixture of Douglas-fir and western hemlock seedlings.

The Gales Creek Trail (non-motorized) is located outside of this sale, but will be impacted for a short period of time during harvesting. The Marketing Unit will work closely with the Recreation Unit to minimize the disruption.

Streams within this sale flow into Gales Creek.

Approximately 0.6 miles of road will be constructed to harvest this sale. 2.2 miles of road will be improved in conjunction with this sale. The new road construction will remain open following the harvest to aid in reforestation of the units. These roads will be evaluated for vacating when reforestation goals have been met.

Larch Mountain Basin

Frog Holler: This is a 90 acre modified clearcut. The sale is located within Douglas-fir stands that range in age from 60 to 68 years. The understory vegetation consists of salal and ferns. The current stand condition is 60% Understory and 40% Layered. The Desired Future

Condition is for non-complex stands. Following harvest, the sale will be planted with Douglas-fir seedlings with western hemlock and western red cedar seedlings planted within areas that contain the root disease *Phellinus weirii*.

Streams within this sale flow into Idiot Creek.

Approximately 0.6 miles of road will be construction to facilitate this harvest. Almost 2 miles of road will be improved in conjunction with this sale. The new road construction will be evaluated for vacating following the completion of reforestation activities.

High on the Hog: This is a 113 acre modified clearcut. The mixed Douglas-fir stands are between 65 to 74 years-old. Approximately 60% of the sale has a current condition of Understory with the remaining 40% classified as Layered. The Desired Future Condition for the sale is for non-complex stands. Following harvest, the sale will be planted with Douglas-fir seedlings with western hemlock and western red cedar seedlings planted within areas that contain the root disease *Phellinus weirii*.

Streams within this sale flow into an un-named tributary of the Devil's Lake Fork of the Wilson River.

Approximately 0.2 miles of road will be construction to facilitate this harvest. Approximately 2.6 miles of road will be improved in conjunction with this sale. The new road construction will remain open following the harvest to aid in reforestation of the units. These roads will be evaluated for vacating when reforestation goals have been met.

McGregor Basin

Moving Music: This is a 113 acre modified clearcut. The mixed Douglas-fir stands within the sale are approximately 69 years-old with a salal/vine maple understory. The majority of the sale has a stand condition of Understory while a 16 acre portion is currently classified as Layered. The sale has a Desired Future Condition of non-complex stands. Following harvest, the operation will be planted with a mixture of Douglas-fir and western hemlock seedlings.

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

Approximately 1.4 miles of road will be constructed to facilitate the harvesting of this sale. A mile of road will be improved in conjunction with this sale including replacing a culvert that prohibits fish passage with one that allows fish passage. Approximately 0.5 miles of newly constructed road will be vacated following the harvest. The rest of the new roads will remain open to facilitate reforestation activities and will be evaluated for vacating when reforestation goals have been met.

The harvest unit is not within an NSO Provincial Circle, however, 1 acre of new road construction needed to access the operation is located within the outer edge of the South Rock Creek NSO site. The NWOA biologist has prepared a biological assessment for the removal of 20 to 30 trees from the outer edge of the circle. This assessment will be reviewed by the US Fish and Wildlife service.

Rock Rabbit: This is a 76 acre modified clearcut. The Douglas-fir trees within this operation are approximately 75 years-old. The current stand condition of the sale is Understory. The Desired Future Condition is for non-complex stands. Following harvest,

the sale will be planted with Douglas-fir seedlings and a minor amount of western hemlock and western red cedar seedlings.

Streams within the sale flow into Rock Creek.

Approximately 0.4 miles of road will be constructed. Another 1.1 miles will be improved as part of the sale. The new road construction will be evaluated for vacating following the completion of reforestation activities.

Rogers Basin

Minus Phellinus (ALT): This is a 111 acre modified clearcut. The 65 year-old Douglas-fir stands are located in an area heavily infected with the root disease *Phellinus weirri*. The current stand condition of the sale is 50% Closed Single Canopy, 35% Understory and 15% Layered. The Desired Future Condition for the sale is for non-complex stands. A *Phellinus weirri* survey will be completed before the sale is reforested. Following the harvest, western hemlock, red alder and western red cedar seedlings will be planted. Douglas-fir seedlings may be planted in areas where there is no known root disease.

The Rogers Camp Rd Quad trail and the Firebreak One trail are within and along the edge of this operation respectively. The Marketing Unit and the Recreation Unit will work closely while preparing and writing the timber sale contract for this operation to minimize the impacts to the trails and to minimize the disruption of use of the trail system.

Streams within the sale flow into a tributary to Low Divide Creek.

Almost 1 mile of road will be improved in conjunction with this sale. Approximately 0.05 miles of new road will be constructed. Following the completion of harvest, 0.9 miles of road will be blocked.

Scoggins Creek Basin

No harvest operation is planned within this basin.

Sunday Creek Basin

Florade (ALT): This is a 106 acre modified clearcut consisting of a 66 year-old Douglas-fir stand. The stand is currently classified as Understory with a Desired Future Condition of non-complex stands. Following harvest, a mixture of Douglas-fir, western hemlock and noble fir seedlings will be planted.

Streams within the sale flow into Maple Creek.

Approximately 0.64 miles of road will be constructed and 2.23 miles of road will be improved in conjunction with this sale. The new road construction will be evaluated for vacating following the completion of reforestation activities.

Sunday Passage: This is a 168 acre modified clearcut consisting of two separate units. Unit 1 is a 66 year-old Douglas-fir stand currently classified as Understory. Unit 2 is a 49 year old Douglas-fir stand currently classified as Understory. The Desired Future Condition for both units is for non-complex stands. Following harvest, both units will be replanted with a mixture of Douglas-fir and western hemlock seedlings.

Streams within Unit 1 flow into Maple Creek while streams from Unit 2 flow into Sunday Creek.

Approximately one half mile of new roads will be constructed to facilitate the harvest. Almost 7 miles of road will be improved in conjunction with this sale. Following the completion of harvest, 0.2 miles of road will be vacated. The remaining new road construction will be left open to aid in reforestation activities and will be evaluated for vacating when reforestation goals have been met.

Upper Deck: This is a 109 acre modified clearcut separated into two units. Unit 1 is a 52 year-old Douglas-fir stand currently classified as Understory. Unit 2 is a 59 year-old Douglas-fir stand currently classified as Closed Single Canopy. The Desired Future Condition for both units is for non-complex stands. Following harvest, Unit 1 will be reforested with a mixture of Douglas-fir and western hemlock seedlings. Unit 2 will be reforested with Douglas-fir, western hemlock and noble fir seedlings.

Streams within this sale flow into Sunday Creek.

Approximately 0.2 miles of new road construction is needed to facilitate the harvest of this sale. Approximately 0.7 miles of road within the area will be blocked following the completion of harvest.

Upper Salmonberry Basin

Cochran Bull: This is a 100 acre modified clearcut. The sale is located within 59 to 66 year-old Douglas-fir stands currently classified as Understory. The Desired Future Condition of this sale area is for non-complex stands. The sale will be reforested with a mixture of Douglas-fir and western hemlock seedlings following harvest.

Streams within this sale flow into Pennoyer Creek.

No new road construction is necessary to access this sale. Approximately 3.8 miles of road will be improved in conjunction with this sale.

Salmon Belly: This is a 114 acre modified clearcut. The harvest is located within 71 to 82 year-old mixed conifer stands. The majority of the harvest area is currently classified as Understory with 20 acres classified as Closed Single Canopy. Following harvest, the sale will be replanted with a mixture of Douglas-fir, western hemlock and noble fir seedlings.

Streams within this sale flow into the Salmonberry River.

No new road construction or road improvement is planned at this time.

Wheeler Basin

By George: This is a 153 acre light partial cut. The stands within the unit are 83 year-old mixed conifer. The sale was lightly thinned twice before in 1974 and 1996. The majority of the stands are currently classified as Closed Single Canopy with 25 acres classified as Layered. The Desired Future Condition is for Older Forest Structure.

By George is located within the Wolf Creek Terrestrial Anchor Site. This sale was reviewed in the field by ODF biologists and resource specialists and ODFW biologists. It was agreed upon that a light partial cut targeting the removal of pole products (from overstory Douglas-fir trees) would continue the stands along the complex structure pathway and fit within the

management guidelines for a TAS. Western hemlock, and western red cedar trees will be reserved from harvest. These species are typically found in the understory or are co-dominant trees within the stand. Reserving these from harvest will maintain the current layering within the stand. In some areas no harvesting may occur and in other areas 10 to 15% of the overstory Douglas-fir trees will be removed. Some sound down wood will be left within the unit as a result of the operation.

This sale is located within the South Fork Rock Creek Northern Spotted Owl site. The NWOA biologist has prepared a biological assessment for this proposed sale. This assessment will be reviewed by the US Fish and Wildlife service.

Streams within the sale flow into a tributary of Wolf Creek. Approximately 3 acres of this sale are located within the Lousignont/Upper Nehalem River Aquatic Anchor (AA), however, there are no streams within or nearby this area.

No new road construction or road improvement is planned at this time.

Ground Round: This is a 43 acre modified clearcut. The sale is located within a 73 year-old Douglas-fir stand currently classified as Closed Single Canopy. The Desired Future Condition of the sale is for non-complex stands. The sale will be reforested with a mixture of Douglas-fir and western hemlock seedlings following harvest.

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

No new road construction or road improvement is planned at this time.

Step Over: This is a 110 acre modified clearcut. The Douglas-fir stands within this sale are between 77 to 80 years-old and currently classified as Understory. The Desired Future Condition of the sale is for non-complex stands. There is a small component of larger, older trees within this unit. The majority of these larger trees will be retained within green tree retention areas. The unit will be reforested with a mixture of Douglas-fir and western hemlock seedlings following harvest.

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

Approximately 0.8 miles of new roads will be constructed to facilitate this harvest. These roads will remain open to provide access during reforestation activities and will be evaluated for vacating once reforestation goals have been met.

The cultural resources review conducted by a qualified archaeologist at the Oregon Department of Transportation (ODOT) indicated that an old wagon road may have been located within the sale area at one time. The sale area has been reviewed for potential resources in the field by district staff and no cultural resources were found.

Wilark Basin

Clatstastic: This is a 113 acre modified clearcut separated into two units. The stands within the sale are 73 year-old mixed conifer stands currently classified as Layered. The Desired

Future Condition for both units is for non-complex stands. Following harvest, both units will be reforested with a mixture of Douglas-fir and western hemlock seedlings.

Streams within unit 1 flow into the Little Clatskanie River. Unit 2 streams flow into a tributary to the Clatskanie River.

No new road construction is planned at this time. Approximately 2 miles of road will be improved in conjunction with this sale.

Forest Roads Management

Overview

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

The district's total road system consists of mostly collectors and spurs; in total approximately 776 miles of mostly single-lane roads with turnouts. Many of the district's main roads (collectors) were originally built as railroads and then converted to truck roads in the 1940s and 1950s to standards considerably less stringent than those applied today. These roads were originally often constructed with inadequate drainage systems, poor surfacing, and little regard for slope stability and fish passage. Most of these roads have been upgraded and now have rock surfacing, and improved width and alignment. There are still a few roads that are a legacy from those earlier decades and need improvement, access restriction, or vacating.

Road drainage structure improvement continues district wide. The district is in the process of inventorying all road culverts; 728 miles have been inventoried of the 776 total district miles. The culvert inventory will help identify such issues as maintenance needs, undersized culverts, and connected ditchlines. A connected ditchline is where ditch water flows directly into streams, resulting in increased sediment. Cross drain culverts are installed just before stream crossing culverts and direct water onto the forest floor away from live streams.

Almost all of the road work in this AOP is related to constructing spur roads and for improving haul routes for the FY18 timber sales. In addition, the District road crew will be maintaining roads not used for timber sales. Timber sale associated road work is summarized in the Forest Roads Summary Table A-3.

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

Under this plan, 4.7 miles of road will be constructed, and 22.5 miles of road will be improved. Of the roads to be improved, all are collector or spur roads that are part of the existing road system and will be improved to maintain current road standards.

Road Construction

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

There are 4.7 miles of new rocked construction in the AOP. Construction costs are estimated at \$449,800. Most of these spur roads will be constructed on gentle slopes. New LiDAR based slope information was helpful in locating roads away from locally steep slopes.

Road Improvement

Approximately 22.5 miles of road will be improved as part of the FY18 primary timber sales.

The majority of this improvement work will be performed on collector and spur roads and will consist of installing new cross drains and disconnect culverts, replacing culverts, ditchline improvements, and new surfacing. Improvement costs are estimated at \$894,050.

Road Access Management

Approximately 1.4 miles of road will be vacated or blocked as part of timber sales in this years' AOP. Upon completion of logging, 0.7 miles of rocked roads will be vacated and 0.7 miles of dirt roads will be blocked. Roads continue to be planned to reduce conflicts with recreational uses, and keeping the correct users on the correct road or trail, reducing conflicts when trails cross or use roads. Upon completion of Reforestation activities, additional roads will be evaluated for closure.

Total road vacating and blocking projects are estimated at \$6,500.

Road Maintenance

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

Management of Rock Source/Supply

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

Rock Type	Total # on District	# of Rock Sources in FY18	Total Volume in FY18 (cubic yards)
Durable Crushed Rock Pits	8	4	34,500
Marginal Crushed Rock Pits	4	2	6,995
Diggable Pit-run Rock Pits	14	3	5,237
Stockpiles	15	4	8,660
Purchase			5,517
Other			530

Overburden removal, drilling, and blasting are required in all of the Durable and Marginal Crushed Rock Pits to be used in FY18. Rock will be purchased for the Clatstastic timber sale due to a lack of durable rock available in the Wilark Basin. For the Upper Deck timber sale, 530 cubic yards of pit-run rock will be salvaged from existing spur roads in a 2009 clearcut.

A 5,000 cubic yards stockpile of 1 ½"-0 rock will be crushed with the Cochran Bull timber sale. This will replace a depleting stockpile used for maintenance rock on numerous active timber sales in the area. Annually, the District requires between 4,000 to 8,000 cubic yards of crushed rock stockpiles for appraised road maintenance work. The District will continue to explore new rock sources and further development of existing rock pits in FY18.

Land Surveying

For the FY18 AOP, 7 property line corners need to be established, re-witnessed, or restored for Clatstastic; an estimated \$1,295.

Young Stand Management

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

This section describes the types and anticipated amounts of reforestation and young stand management activities that will occur in FY18. Also refer to the attached Young Stand Management Table (Appendix A, Table A-4) for further details. The location and amount (acres) of these activities are estimates based on plans, information and conditions as known at this point in time. The type, amount and specific stand management prescriptions will be further adjusted based on when existing harvest units are completed and on updated assessments and surveys that will occur during and after the 2017 growing season.

Reforestation activities will be completed by using experienced contractors. Also, a portion of the activities will be completed by utilizing inmate crews from South Fork Camp. South Fork Camp is a correctional facility that has joined in a cooperative effort between the Department of Corrections and Oregon Department of Forestry located west of Forest Grove near Highway 6. These crews work on such activities as, planting, inter-planting, tree protection, mechanical hand release, and noxious weed control.

Site Preparation

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

- 1) Slash Burning: There is a portion of one sale that is completed for which broadcast burning is being considered in FY18. Parallel Universe Area 1, 60 acres, is riddled with Laminated Root Rot and will be converted to resistant and immune species, primarily red alder. Quality site prep is essential for red alder to gain quick establishment and optimum performance. Effective and efficient vegetation control after planting red alder is extremely difficult. This unit is conducive to training for district personnel. The decision to proceed with it will be determined in the fall including involvement and coordination with Protection Unit staff.

Other harvest units completed in 2016 and 2017 will be considered for burning of landings and piles to reduce fire hazard and create additional planting spots within the units. Post-harvest assessments will determine the actual necessity to burn.

- 2) Mechanical Site Preparation: There are 5 units that may need some amount of mechanical site preparation, up to 155 acres, which is included in the timber sale contract. The scheduled units are Nehalem Breaks, Two Storeys, Cat's Meow, Round House, and Whirling Derby. Portions of the units have relatively gentle terrain that can be accessed by equipment to accomplish site preparation without causing significant soil compaction.

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

- 3) Chemical Site Preparation: This method of site preparation is used when it is found to be the most cost effective method to control vegetation that would severely impact the survival and growth of newly planted seedlings. The objective is to control brush species to allow stand establishment and maintain 2-3 years free of significant competing vegetation. The current estimate is for approximately 1000 acres. The actual site preparation plan will be prepared in late spring when harvest unit availability and brush development is better known. Approximately 90% of the chemical site preparation will be completed by helicopter spraying, while 10% will be done using ground base methods where aerial application is not cost effective or to protect adjacent ownership or specific resources (i.e. water).

Seedlings / Nurseries

In order to meet the goals of the Forest Management Plan, the State Forests Program requires tree seedlings that are physiologically healthy and best suited for the planting sites. The Reforestation Unit is responsible for determining the appropriate species and stock type to meet management objectives. The tree seedling will be grown at four nurseries and compose of 65% bare root and 35% plug stock for planting in FY18. Majority of the species will be 70% Douglas fir while approximately 30% will comprise of western hemlock, western red cedar, grand fir, Nobel fir, and red alder. The district scheduled 550,000 seedlings to be planted in FY18.

Planting

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

- 1) Initial Planting (Clearcut Units): There are an estimated 1100 to 1200 acres that will be planted during FY18. All of these sites will be planted to allow for the establishment of stands that can be managed to provide complex structure. A mix of transplant and plug Douglas-fir seedlings will compose 70%-85% of the planting stock on these sites where root rot is not a concern. Other native species will be selected and either mixed with the Douglas-fir or planted on micro sites for which they are best suited. These species include noble fir, grand fir, western hemlock, western red cedar, and red alder plug stock. Where root rot is a concern resistant and immune species will be planted such as, western red cedar, western hemlock, and red alder. The objective of planting a variety of species is to create a healthy and diverse stand by placing tree species on sites for which they are well adapted and where they will experience a high rate of survival and growth. Majority of the planting will be completed by contractors, while approximately 20-25% will be done by utilizing South Fork inmate crews.
- 2) Interplanting: The interplanting objective is to raise stocking in young plantations that are below acceptable levels, to a minimum of 300 trees per acre. Surveys are conducted one and two years after initial planting to determine interplanting needs. Where necessary, interplanting is done the following winter. During the spring and fall of 2017, surveys will be conducted to determine interplanting needs for the 2018 planting season. The current estimate is 150 acres, based on historical averages. Approximately half of the project will be done by utilizing South Fork inmate crews, while the other portion will be done by contractors.
- 3) Underplanting: None planned in FY18.

Vegetation Management

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

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

Emphasis is being put on site preparation and planting the first season following timber harvest, resulting in better performance of trees in planted units, a reduced need for follow-up interplanting or vegetation management, and the opportunity for diverse vegetation to develop along with planted trees. Plantations will be evaluated during the spring and summer of 2017 to determine treatment needs for FY18.

Manual: The current estimate is 150 acres, based on historical averages. This work will be accomplished by utilizing South Fork inmate crews.

Chemical: The current estimate is 350 acres. Any areas that show development of unacceptable levels of competing vegetation will either be treated by helicopter or on the ground by hand.

Tree Protection

Deer and elk, as well as mountain beaver, can heavily damage young stands and prevent meeting Forest Management Plan goals. Various tree protection strategies are applied to help re-establish trees in areas with high concentrations of these species. Most commonly, various types of physical barriers are to help prevent damage from big game. Mountain beaver populations have greatly increased in the past few years across the District. We continue to observe historically high levels of damage.

Approximately 25 acres of new tube installation and maintenance will be required with the FY18 planting for protection of western red cedar. The bulk of this is located in micro-sites well suited to cedar or in pockets of *Phellinus weirii* (root disease) delineated in harvest units. Bud capping will be required on approximately 175 acres where heavy populations of big game are present. The need for mountain beaver trapping has been projected on approximately 690 acres. Heavy populations are being trapped in harvest units prior to planting. Majority of this work will be accomplished by utilizing South Fork inmate crews.

Pre-commercial Thinning

Although there is a back log of 250 acres, no PCT is scheduled for the FY18 AOP due to budget constraints. The district will survey and evaluate potential stands for pre-commercial thinning needs over the fiscal year. It is anticipated there will be an additional 200 acres for FY19.

Fertilization

Budget constraints in FY18 eliminate the consideration of any fertilization.

Pruning

No pruning is planned for FY18 beyond W. white pine for disease prevention of blister rust. Approximately 40 acres are anticipated. This work will be accomplished by utilizing South Fork inmate crews.

Invasive Species

Reforestation continues to work with the Marketing, Forest Roads, and Recreation Units to identify appropriate steps each unit can take to prevent the introduction and spread of invasive plants. Knotweed, Scotch broom, and false brome are the primary species known to exist in the District. Active control measures are being planned and prioritized for roadside, in-unit, and trail treatment. Funding is limited. Two harvest units are scheduled for site preparation herbicide treatment as a preventive measure to inhibit the invasion of scotch broom. They are Pride of Doty Area 3 and portions of Parallel Universe, totaling 212 acres.

Roadside Spraying

Reforestation works with Forest Roads on the management of vegetation on the districts forest roads. Vegetation management protects the investment by preventing damage from unchecked vegetation growth, helps to maintain a safe driving environment by maintaining clear sight distance, controls noxious weeds, and reduces fire hazards. Roadside spraying using herbicides is one of the tools used to manage unwanted vegetation along roads ways. During the spring 2017, roadside vegetation surveys will be conducted to determine roadside treatment needs for FY18. The current estimate is 200 miles, based on historical averages. The project will be done by utilizing experienced contractors.

Stocking Surveys

The Reforestation Unit has the responsibility of ensuring that the goals of the Forest Management Plan are met. Stocking surveys is one of the tools 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, such as interplanting and animal damage control measures. In addition, stocking surveys are conducted in order to assess free-to-grow status and to get baseline data on the stand for future management planning, for example evaluating release treatments and pre-commercial thinning candidates.

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

Recreation Management

Overview of Recreation Management

Recreation use has been taking place on the Tillamook State Forest and the Forest Grove District for more than 60 years and has been managed in varying degrees since the 1960s. Currently the direction for management of the Recreation program flows from the Northwest

Oregon State Forest Management Plan (2001), the Tillamook State Forest Comprehensive Management Plan (1993), and the Recreation Action Plan 2000 (2001). Budget levels remain static and Agency focus continues to be on maintaining existing infrastructure and opportunities.

Planned Activities for FY 2018

Facilities

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

- 5 campgrounds
- 2 day use picnic areas
- 2 highway wayside interpretive sites
- 12 trailhead facilities

All developed facilities will be operated and maintained in good working order and will be kept clean and safe for public use and managed to minimize user conflict and to avoid adversely impacting the resource. The operating season for developed campground facilities will remain consistent with the FY2017 operating season.

Dispersed Use

Each year, a high amount of dispersed recreation use occurs across the Tillamook State Forest. Most of this use is associated with recreation activities such as hunting, camping, angling, sight-seeing, target shooting, swimming, and mushroom picking. Most of these activities take place at specific dispersed use sites. These activities are expected to continue in FY 2018 and will require varying degrees of District staff attention. Dispersed use sites will be monitored, maintained, and improved as resources allow, to meet safety, sanitation, and resource protection objectives.

See Table 6 below for developed and dispersed facility maintenance and improvement projects planned for FY2018

Table 6. Developed and Dispersed Facility Projects

Project Type	Project Name	Work Resources	Project Description
Facility Improvement	Reehers Camp site sign frame replacement	District staff and South Fork Inmate Crew	Project work will involve replacing the site frame for the campground site sign and for the trailhead site sign.
Facility Improvement – Planning	Kings Mountain Trailhead parking area expansion.	District staff, State Forest Engineer	Project work will involve completing site feasibility study, identifying alternatives for expansion, and developing design plans for parking area expansion.
Facility Improvement - Planning	Elk Creek Campground site improvement.	District staff	Project work will involve completing an evaluation of campsites 7 and 14 and developing design concepts for improving long-term sustainability of the campsites.
Facility Maintenance	Campground weed/invasive species spray project	District staff / Contractor / South Fork	Complete weed and invasive species control work at Browns Camp, Stagecoach Horsecamp, Reehers Camp, and Gales Creek Campground.
Dispersed Site Improvement	Lyda Camp and Woods Point Site Improvement	District Staff	Project work will involve implementing design work completed in FY2017.
Dispersed Site Improvement	Wilson River Dispersed Site Improvement	District Staff (Recreation, Protection, Roads) and Resource Specialists	Project work will involve improvement at one or two sites depending on funding and crew capacity.

OHV Trails

The District will continue to place emphasis on maintenance and upgrade of existing trails, development of partnerships to increase our capacity to manage the trail network, and on upgrading and improving the designated OHV trail network in an effort to better connect the trail system, protect forest resources, re-establish trails after timber harvest, move trail users off the mainline haul and public use roads, reduce trail congestion and the potential for conflict between trail users, improve user safety, improve maintenance efficiency, and reduce infrastructure investments and maintenance workload. Due to trail maintenance needs, winter weather limitations, and fire season restrictions, some project work from FY2017 is expected to extend into FY2018. FY2018 OHV trail projects are identified and briefly described in the following table (Table 7).

Table 7. OHV Trail Projects

Project Type	Project Name	Project Mileage	Work Resources	Project Description
Trail Bridge Replacement	Chute Trail Bridge Replacement	NA	District Staff / ODF Equipment Operators / Volunteers	Project work will involve dismantling of the existing bridge and construction of a new 35 foot long bridge. This project addresses user safety, user accommodation, trail system sustainability and resource protection issues.
Trail System Improvement	Kids Sand Pile Play Area MC/Quad Loop	¼ to ½ mile	District Staff / Resource Specialists / Volunteers	Project work will include integration planning, trail location and design, and trail construction. This project will expand opportunity for youth and new rider skill training and address conflict issues associated with heavy use at the site.

Non-motorized Trails

The District will be focused on making improvements to existing non-motorized trails to address user safety, resource protection, investment protection, sustainability, and user accommodation. Due to trail maintenance needs, winter weather impacts and limitations, and South Fork and District staff capacity, some project work from FY2017 will extend into FY2018. FY2018 non-motorized trail projects are identified and described in the following table (Table 8).

Table 8. Non-Motorized Trail Projects

Project Type	Project Name	Project Mileage	Work Resources	Project Description
Trail Improvement	Gravelle Brothers Trail Sandshed Reroute	½ mile estimate	District Staff, South Fork	This reroute will improve user safety, system sustainability, and reduce user conflict.
Trail Bridge Improvement	Wilson River Trail Bridge #2 Railing Addition	NA	District Staff and South Fork	This project will involve construction of a handrail on the existing bridge. Addition of the handrail will address user safety concerns and bring the bridge up to code.
Trail Bridge Construction	Wilson River Trail Bridge #3	NA	District Staff, Resource Specialists, and South Fork	This project will involve planning, design, and construction of a 35 foot long (estimate) glu-lam stringer bridge at an existing open water crossing to reduce resource impacts and to more safely accommodate year round trail use.

Trail Maintenance (OHV and Non-motorized)

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

The District expects to complete condition assessments and trail clearing maintenance on all trails (115 miles OHV and 65 miles non-motorized) and will complete user safety and resource protection maintenance as needed. Other basic trail maintenance work is completed on most trails every two or three years. Approximately 30% to 40% of the network will receive basic trail maintenance attention in FY 2018. Storms during the winter of 2017 have significantly impacted the trail network. Slides, washouts, damaged bridges, and heavy concentrations of down trees have been identified along many segments of the trail network. A significant amount of heavy trail maintenance work resulting from the winter storm events is expected to extend into FY2018.

Volunteer Program

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

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

Activities associated with the volunteer program will include the recruitment, selection, and management of campground hosts; planning and management of trail maintenance, trail development, and special volunteer projects; facilitation of Adopt a Trail program activities; and management of the Tillamook State Forest Volunteer Trail Patrol program. The Recreation Unit anticipates facilitating between 3,000 to 4,000 hours of volunteer contribution in FY2018.

District staff are also involved in revising and updating the ODF Volunteer Program Manual. This work will extend into FY2018.

Event Management

The Forest Grove district permits organized sponsored trail use events. Both motorized and non-motorized trail events are held on the district. The events consist of poker runs (fun runs), competitive timed motorcycle races, trials motorcycle competitions, and four-wheel drive rallies. Other events, such as equestrian poker rides, mountain bike races, running races, and archery events are scheduled less frequently. Non-motorized events will be evaluated to determine if the District has the capacity to support proposed event activities. In FY 2018 the district expects to review, permit, and administer 8 to 10 motorized trail events and 2 non-motorized trail events. Motorized events for FY 2018 were scheduled at a meeting in November 2016. There are no plans to pre-schedule FY 2018 non-motorized events.

Grants

The Recreation Unit expects to apply for and/or administer several grants in FY2018 to support project and program activity.

- ATV and RTP grants to support purchase of OHV trail maintenance equipment. (Administration and Application)
- RTP grant to support trail bridge replacement and development projects (Application and Administration)
- Tillamook County Transient Lodging Tax grant to support purchase and installation of a vault toilet at Elk Creek Trailhead. (Application)
- Yamaha Access Initiative grant to support replacement of an OHV trail bridge. (Application).
- Washington County Visitor Association Grant to support trail bridge replacement on the Low Divide Loop Trail. (Application and Administration)

Target Shooting

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

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

In FY2018, development of additional target shooting lanes and closure of unsafe target shooting sites may flow from this work.

Unplanned Activities

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

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

Other Integrated Forest Management Projects

Aquatic Habitat Improvement

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

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

Several strategies, described in the Forest Management Plan, dictate protection measures designed to protect, maintain, and restore aquatic and riparian functions. These strategies are employed during harvest activities and include but are not limited to: leave trees adjacent to streams to protect stream temperature, provide nutrients, protect stream banks, and eventually provide wood to improve fish habitat. Best management practices for road construction, reconstruction, and maintenance minimize impacts to water quality. Aquatic Anchors have been established on 6 watersheds in which additional aquatic conservation measures are applied. The Aquatic Anchors include: Upper Rock Creek, Lousignont Creek/Upper Nehalem River, South Fork Salmonberry, Devils Lake Fork Wilson River, Elkhorn Creek and Ben Smith Creek.

Fish Distribution Surveys: Streams are classified in part as supporting fish (Type F) or not supporting fish (Type N). Riparian protection measures depend in part on the presence of fish. Fish distribution information varies across the district. Many streams have been surveyed with electro-fishing techniques that established the upper extent of fish use. However many very small streams have not yet been surveyed for fish presence. Streams in the AOP will be evaluated with either an electro-fishing method (through contractual arrangements with private consultants or support from ODFW) or with a Physical Habitat Survey (*State Forest Program Bulletin 09-04, Determining the Upper Extent of Fish Use...*). The physical methodology was developed in conjunction with Oregon Department of Fish and Wildlife. The seasonal/perennial break in the streams will be evaluated during fish distribution surveys or during sale layout.

Aquatic and Riparian Conditions: Watershed assessments have been completed on 3 watersheds on this district. In addition the Oregon Department of Fish and Wildlife completed Fish Habitat Assessments and summarized the findings by district (ODFW 2005-2006). Limiting factors have largely been identified in the ODFW conservation strategy, the 2005 State of Oregon Coastal Coho Assessment (OCCA) (State of Oregon 2005), and ODF watershed analyses. Common limiting factors include: a lack of large wood in streams, increased fine sediment in riffles, a lack of complex pool habitat, and a need for more off-channel habitat. The task during this AOP is to identify, design, and implement projects to address the limiting factors either through opportunistic projects (e.g. harvest units adjacent to streams that meet certain criteria) or through larger, multi-collaborator, diversely funded projects.

Restoration Goals and Identification Process: The overarching principles for fish habitat restoration are described in the Forest Management Plan. Landscape and site-specific strategies will improve levels of aquatic function in the short term to meet the immediate habitat needs of depressed species and place aquatic habitats on a trajectory toward desired conditions. At the same time actions are carried out to restore the ecological processes and functions that create and maintain self-sustaining habitats over the long term. Restoration strategies include completing assessments to identify limiting factors and identify, design, and implement projects to remedy identified problems. Projects should mimic natural process, use multidisciplinary approach, and consider site-specific as well as watershed scale processes and disturbance regimes. Projects will be designed to re-establish natural physical and biological processes. The district's approach to restoration planning is further refined in the Implementation Plan (*Forest Grove District 2011 Implementation Plan, "Aquatic Resources – Stream Enhancement Projects", page 38*). The types of projects in order of priority are: (1) Fish Passage, (2) Road Decommission or Hydrologic Disconnection, (3) Instream Habitat

Projects, (4) Alternative Plans to Manage Riparian Areas, and (5) Beaver Relocation. More information on these project types and rationale for priorities is provided in the Forest Grove District IP.

Projects can be planned or implemented *opportunistically* (when operating near streams that would benefit from restoration efforts) or with a more complex and typically *larger scale* approach both of which will be evaluated for ecological benefits. All sales will be evaluated for the ability to do in stream habitat projects. Those projects with high benefit and relative lower costs, which are supported by ODFW, will be implemented as resources allow.

For the Forest Grove District the goals are to:

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

In the FY18 AOP, an initial screen by the ODF Aquatic and Riparian specialist and ODF road specialists have identified 1 stream along the haul route to Moving Music as a potential candidate for restoration projects.

Planned Projects within the FY 18 AOP:

- 22.5 miles of road will be improved. This includes installing additional cross drain culverts to hydrologically disconnect the roads from streams as possible.
- 1 fish passage issue will be addressed on these roads.
- 0 stream enhancement projects will be completed.

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

Land Exchange

There are no active land exchange projects for this AOP.

Law Enforcement and Public Safety

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

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

Forest Grove District staff also work closely with Oregon State Patrol to address law enforcement issues on the district and with the Washington County Sheriff's Office to

support and facilitate law enforcement patrol and search and rescue activities on the Tillamook State Forest in western Washington County.

Firewood Cutting Program

The district administers an active public woodcutting program issuing between 2,000 and 3,000 permits annually, generating \$20,000 to \$30,000 in gross revenue. The Forest Grove District will continue to issue personal firewood cutting permits in the coming year for the entire district.

Where:

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

When:

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

Who:

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

Permit Fee:

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

Non-Timber Forest Products

Approximately 200 miscellaneous forest products permits are sold each year, mostly for salal and mushrooms, generating approximately \$20,000 in revenue. In addition, the district sells a small number of negotiated timber sales. These sales may be utilized for recovery of wind thrown trees, fire killed trees, or when an adjacent landowner needs to purchase right-of-way timber from the state in the event they have been granted permission to construct an access road across state ownership. These special sales usually generate revenues between \$40,000 and \$80,000 annually.

Planning

Below are the significant district-level planning projects currently scheduled for commencement, completion, or both in FY18.

Stand Level Inventory

During FY 18, Stand Level Inventory (SLI) is planned for 40 stands totaling approximately 4,640 acres.

Fish and Wildlife Surveys

Northern Spotted Owl Surveys

For FY18 AOP, the Forest Grove District will be using a density survey program, in order to effectively comply with federal and state Endangered Species Acts and to contribute to Forest Management Plan (FMP) goals. Survey requirements are determined in accordance with *ODF Northern Spotted Owl Operational Policies*, February 2013. Density surveys are accomplished with strategically placed calling stations throughout the district ownership which allows for complete survey coverage of all potentially suitable NSO habitat. Some scattered ownership parcels where no operations are planned may not be covered by the density surveys.

Marbled Murrelet Surveys

Most of the Forest Grove District is located within the Systematic Survey Zone (*ODF Marbled Murrelet Operational Policies*, July 2010), except for some ownership parcels in the Bell Mountain Management Basin, thus operational surveys for marbled murrelets will not be conducted for sales in the FY18 sale plan.

Table 9. Summary of Biological Assessments for Threatened and Endangered Species

Operation	AOP Year	Species ¹ (NSO/MM)	Survey Years ²	BA ³ Required	Special Considerations
By George	2018	NSO	Density	Yes	
Moving Music	2018	NSO	Density	Yes	For road construction only

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

² Years that surveys have been completed or are planned.

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

Research and Monitoring

The Forest Grove District will assist in a variety of research and monitoring projects in FY18. Examples include:

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

- ◆ OSU Intensive Forest Management study.

Recreation Program Planning

In FY2018, staff from the Recreation Unit will be participating in program planning work associated with the State Forest Division Business Improvement project focused on the Recreation, Education, and Interpretation (REI) programs. The objective of the project is to establish a sustainable financial and organizational structure that will support the REI programs, now and into the future, and that will position the programs to be able to meet the increasing demand, changing demographics and the evolving and expanding variety and diversity of recreation uses on state forest land.

Other Planning Operations

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

Public Information and Education

Public Information and Involvement

Public information and involvement activities will include review and input regarding the FY18 Annual Operations Plan. In addition, public involvement activities concerning the Recreation program will include planning and facilitating Volunteer Trail Patrol meetings, participating and presenting at user group club meetings, and involving individuals or clubs in various district projects.

Public Education

The district is involved in a variety of projects focused on informing and educating the public and interpreting the natural and cultural history of the Tillamook State Forest (TSF).

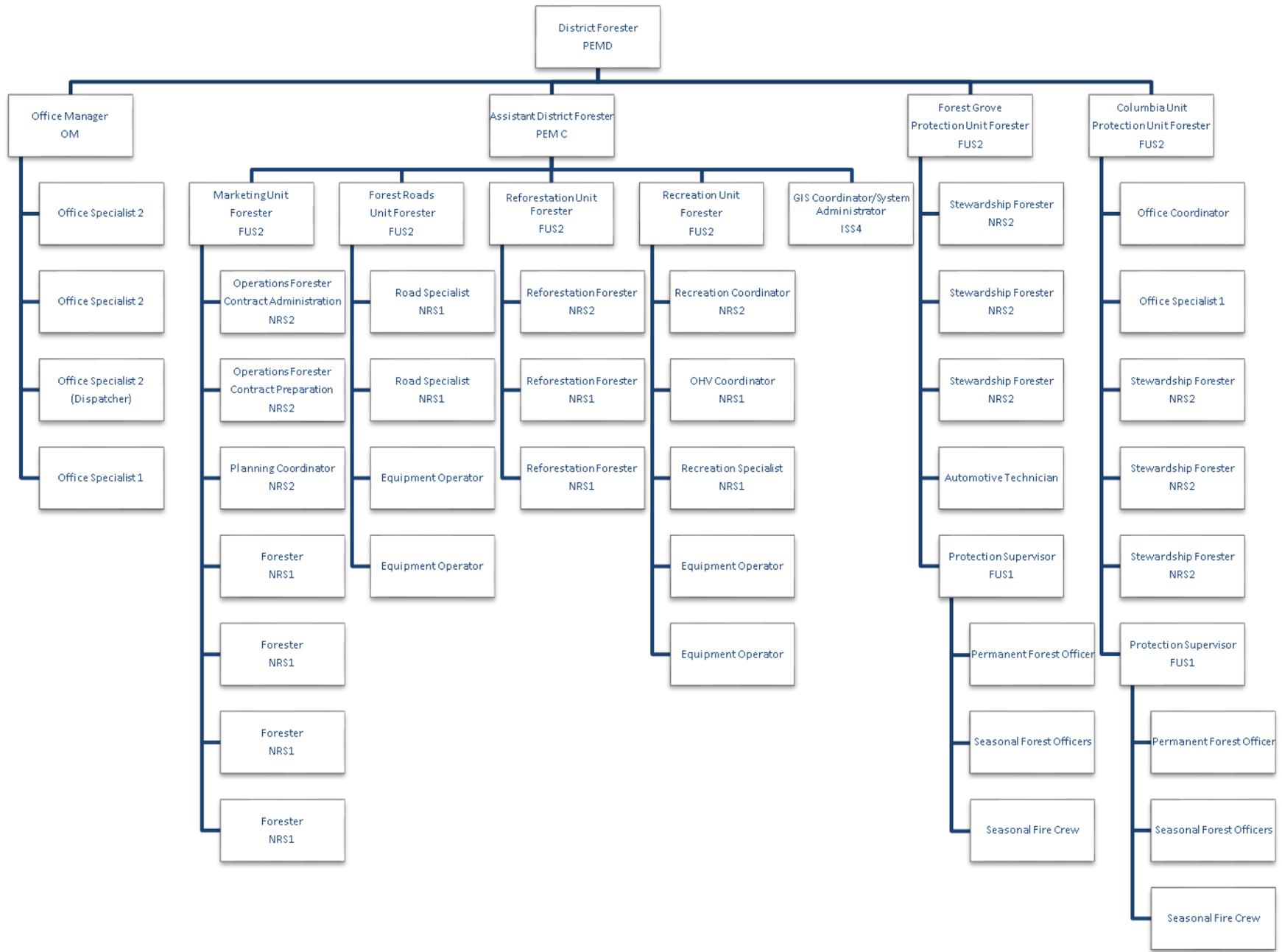
Associated activities will include:

- ◆ Maintenance of the Tillamook State Forest web page, the Tillamook State Forest Blog and recreation information phone line.
- ◆ Development of the TSF recreation brochure.
- ◆ Development of the TSF Visitor Map/Guide
- ◆ Development of information board messaging.
- ◆ Updating and reprinting OHV and Non-motorized trail brochures and guides.
- ◆ Development of press releases about Recreation program projects and recreation opportunities on the Tillamook State Forest.
- ◆ Writing articles for user group newsletters, ODF website, The Lookout, and other publications.
- ◆ Developing tools and displays to recognize and recruit volunteers and to inform and educate the public about Tillamook State Forest recreation opportunities.
- ◆ Supporting local OHV user group education programs.
- ◆ Supporting and participating in NWOA Forestry education and interpretive programs.

Administration

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

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



APPENDIXES

A. Summary Tables

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

B. Maps

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

C. Consultations with Other State Agencies

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

D. Public Involvement

This appendix describes 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 Major Changes

Appendix A

Summary Tables

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

TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: Forest Grove

Fiscal Year: 2018

Date: 02/22/2017

Primary Operation	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
	BOF	CSL			Partial Cut	Clear-cut	Con-ifer	Hard-woods	Total	Gross	Projects	Net
Bell Bottom	100%		Washington (100.0%)	4	0	156	6.5	0	6.5	\$3,409,144	\$224,900	\$3,184,244
By George	100%		Tillamook (100.0%)	1	153	0	1.4	0	1.4	\$1,668,521	\$0	\$1,668,521
Clatstastic	100%		Columbia (100.0%)	2	0	114	5.5	0	5.5	\$3,033,803	\$215,000	\$2,818,803
Cochran Bull	100%		Tillamook (100%)	1	0	100	5.2	0	5.2	\$2,900,668	\$241,300	\$2,659,368
Frog Holler	100%		Tillamook (100.0%)	2	0	90	3.3	0	3.3	\$1,735,488	\$129,700	\$1,605,788
Ground Round	100%		Washington (100.0%)	3	0	43	2.6	0	2.6	\$1,533,879	\$0	\$1,533,879
High On The Hog	100%		Tillamook (100.0%)	1	0	113	4.4	0	4.4	\$2,199,280	\$96,450	\$2,102,830
Moving Music	100%		Clatsop (100.0%)	3	0	113	6.0	0	6.0	\$3,326,509	\$216,600	\$3,109,909
Rock Rabbit	100%		Clatsop (100.0%)	2	0	76	4.0	0	4.0	\$2,122,724	\$45,400	\$2,077,324
Salmon Belly	100%		Tillamook (100.0%)	4	0	114	5.9	0	5.9	\$3,106,272	\$0	\$3,106,272
Step Over	100%		Washington (100.0%)	3	0	110	5.0	0	5.0	\$2,622,620	\$82,600	\$2,540,020
Sunday Passage	100%		Washington (100.0%)	3	0	168	6.7	0	6.7	\$3,530,188	\$377,700	\$3,152,488
Upper Deck	100%		Washington (100.0%)	4	0	108	4.5	0	4.5	\$2,262,501	\$27,000	\$2,235,501

Total:					153	1,305	61.0	0.0	61.0	\$33,451,597	\$ 1,656,650	\$31,794,947
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Alternate Operations

Florade	100%		Washington (100.0%)		0	106	3.8	0	3.8	\$1,889,151	\$120,300	\$1,768,851
Minus Phellinus	100%		Washington (100.0%)		0	100	4.5	0	4.5	\$2,370,576	\$16,300	\$2,354,276

PRIMARY HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

District: Forest Grove

Fiscal Year 2018

Date: 12/05/2016

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

Primary Harvest Operations	Unit (Optional)	Forest Health Issues ¹	Invasive Species	LYR/OFS Structures ²	Landcape Design LYR/OFS ³	Install/Replace Culverts on Fish Bearing / Perennial Streams	Harvesting within 100' of Fish Bearing Stream	Domestic Water Source	Potential Stream Habitat Improvement ⁴	Within Aquatic Anchor	Within Terrestrial Anchor	Operating within a NSO Provincial Circle (BA Required)	Operating within a MMMA (BA Required)	Murrelet Timber Sale Screening Process Required (MM Policy 2.27)	T&E Fish Adjacent to Harvest Unit / Haul Route ⁵	T&E Plants	Geotechnical Issues Needing Field Review	Recreation Sites	Cultural Resources	Scenic Resources	Other Resources or Issues	
Bell Bottom	1, 2, 3													NA	x							Gales Creek Trail located just outside of sale.
By George				x	x						x	x		NA	x							
Clatstastic	1,2			x										NA	x							
Cochran Bull														NA	x							
Frog Holler				x										NA	x							
Ground Round								x		x				NA	x							Potential wetlands
High On The Hog				x										NA	x							
Moving Music				x										NA	x							
Rock Rabbit														NA	x							
Salmon Belly			x												x							
Step Over														NA	x							Small amount of trees greater than 120 years old. A portion of these trees will be retained along stream buffers and within small clumps.
Sunday Passage	1, 2													NA	x							
Upper Deck	1,2													NA	x							

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

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

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

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

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

ALTERNATE HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

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

Alternate Harvest Operations	Unit (Optional)	Forest Health Issues ¹	Invasive Species	LYR/OFS Structures ²	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
Florade			x												x						
Minus Phellinus	1, 2	x	x	x											x						Phellinus weirii present. Rogers Camp Rd quad trail runs through the sale.

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

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

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

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

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

FOREST ROADS SUMMARY

District: Forest Grove

Fiscal Year: 2018

Date: 02/22/2017

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					
Bell Bottom	0.61	\$ 66,700.00	2.19	\$ 153,200	\$ 5,000.00	\$ 224,900.00	\$ 3,409,144.00	7%	
By George						\$ -	\$ 1,668,520.80	0%	
Clatstastic			2.34	\$ 80,400.00	\$ 134,600.00	\$ 215,000.00	\$ 3,033,802.80	7%	
Cochran Bull			3.78	\$ 148,600.00	\$ 92,700.00	\$ 241,300.00	\$ 2,900,667.50	8%	
Frog Holler	0.58	\$ 57,800.00	1.91	\$ 61,900.00	\$ 10,000.00	\$ 129,700.00	\$ 1,735,488.00	7%	
Ground Round						\$ -	\$ 1,533,879.00	0%	
High On The Hog	0.20	\$ 12,000.00	2.62	\$ 65,450.00	\$ 19,000.00	\$ 96,450.00	\$ 2,199,280.40	4%	
Moving Music	1.42	\$ 142,100.00	1.00	\$ 30,000.00	\$ 44,500.00	\$ 216,600.00	\$ 3,326,509.20	7%	
Rock Rabbit	0.44	\$ 28,400.00	1.13	\$ 17,000.00		\$ 45,400.00	\$ 2,122,724.00	2%	
Salmon Belly							\$ 3,106,272.00	0%	
Step Over	0.78	\$ 77,600.00			\$ 5,000.00	\$ 82,600.00	\$ 2,622,620.00	3%	
Sunday Passage	0.53	\$ 55,700.00	6.88	\$ 320,000.00	\$ 2,000.00	\$ 377,700.00	\$ 3,530,188.00	11%	
Upper Deck	0.19	\$ 9,500.00	0.70	\$ 17,500.00		\$ 27,000.00	\$ 2,262,501.00	1%	
Total	4.75	\$449,800	22.55	\$894,050	\$312,800	\$1,656,650	\$33,451,597	5.0%	

Alternate Operations

Florade	0.64	\$ 64,400.00	2.23	\$ 55,900.00		\$ 120,300.00	\$ 1,889,151.00	6%	
Minus Phellinus	0.05	\$ 3,400.00	0.9	\$ 9,000.00	\$ 3,900.00	\$ 16,300.00	\$ 2,370,576.00	1%	

Road Projects Not Associated with Harvest Operations in this AOP

Operation	Construction		Improvement		Other Projects	Total Project Costs	Funding Source	Comments
	Miles	Cost	Miles	Cost				
		\$ -		\$ -		\$ -		
		\$ -		\$ -		\$ -		
		\$ -		\$ -		\$ -		
Total	0.0	\$ -	0.0	\$ -	0.0	\$ -		

REFORESTATION AND YOUNG STAND MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2018

Date: 12/20/2016

Projects Conducted by ODF Staff or Contractors	Board of Forestry			Common School Forest Lands			District	
	Acres Planned	Average Cost*/Acre	BOF Cost	Acres Planned	Average Cost*/Acre	CSL Cost	Total Acres	Total Cost
Seedling / Nursery Costs	1,295	\$192.00	\$248,640.00			\$0.00	1,295	\$248,640.00
Initial Planting	975	\$119.00	\$116,025.00			\$0.00	975	\$116,025.00
Interplanting	75	\$87.00	\$6,525.00			\$0.00	75	\$6,525.00
Underplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
**Tree Protection - Barriers	200	\$62.00	\$12,400.00			\$0.00	200	\$12,400.00
Tree Protection - Direct Control	190	\$75.00	\$14,250.00			\$0.00	190	\$14,250.00
Site Prep - Chemical - Aerial	900	\$60.00	\$54,000.00			\$0.00	900	\$54,000.00
Site Prep - Chemical - Hand	100	\$127.00	\$12,700.00			\$0.00	100	\$12,700.00
Site Prep - Broadcast Burning	60	\$150.00	\$9,000.00			\$0.00	60	\$9,000.00
**Site Prep - Piling Burning	900	\$5.00	\$4,500.00			\$0.00	900	\$4,500.00
Release - Chemical - Aerial	250	\$59.00	\$14,750.00			\$0.00	250	\$14,750.00
Release - Chemical - Hand	50	\$125.00	\$6,250.00			\$0.00	50	\$6,250.00
Release - Mechanical - Hand	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Precommercial Thinning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Pruning	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Invasive Species	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Road Side Spraying	200	\$175.00	\$35,000.00			\$0.00	200	\$35,000.00
Stocking Surveys	2,500	\$10.00	\$25,000.00			\$0.00	2,500	\$25,000.00
Other			\$0.00			\$0.00	0	\$0.00
Totals	7,695	--	\$559,040.00	0	--	\$0.00	7,695	\$559,040.00

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

**Cost for materials only

Projects Conducted by Inmates	Board of Forestry			Common School Forest Lands			District	
	Acres Planned	Average Cost*/Acre	BOF Cost	Acres Planned	Average Cost*/Acre	CSL Cost	Total Acres	Total Cost
Initial Planting	170	\$154.00	\$26,180.00			\$0.00	170	\$26,180.00
Interplanting	75	\$89.00	\$6,675.00			\$0.00	75	\$6,675.00
Underplanting	0	\$0.00	\$0.00			\$0.00	0	\$0.00
Tree Protection - Barriers	200	\$110.00	\$22,000.00			\$0.00	200	\$22,000.00
Tree Protection - Direct Control	500	\$89.00	\$44,500.00			\$0.00	500	\$44,500.00
Site Prep - Chemical - Hand	50	\$99.00	\$4,950.00			\$0.00	50	\$4,950.00
Site Prep - Broadcast Burning	60	\$50.00	\$3,000.00			\$0.00	60	\$3,000.00
Site Prep - Piling Burning	150	\$10.00	\$1,500.00			\$0.00	150	\$1,500.00
Release - Chemical - Hand	50	\$99.00	\$4,950.00			\$0.00	50	\$4,950.00
Release - Mechanical - Hand	150	\$165.00	\$24,750.00			\$0.00	150	\$24,750.00
Pruning	40	\$200.00	\$8,000.00			\$0.00	40	\$8,000.00
Invasive Species	20	\$220.00	\$4,400.00			\$0.00	20	\$4,400.00
Other			\$0.00			\$0.00	0	\$0.00
Totals	1,465	--	\$150,905.00	0	--	\$0.00	1,465	\$150,905.00

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

RECREATION SITE MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2018

Date : 02/10/2017

Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Campgrounds								
Stagecoach Horsecamp					\$1,000		\$1,000	Vault service
Gales Creek					\$7,000		\$7,000	Vault service (4500) garbage service (2500)
Reehers Camp Site Sign Frame Replacement			\$ 600				\$600	Replacing the site sign frames for the campground and the trailhead (2). Material costs. South Fork fabrication and installation
Reehers Camp					\$5,800		\$5,800	Vault service (4000) garbage service (1800)
Browns Camp						\$16,500	\$16,500	Vault service (7000) garbage service 9500 - ATV Fund Transfer
Elk Creek					\$5,600		\$5,600	Vault service (3200) Portable service at TH (1200 - 2400)
							\$0	
Dispersed Use Sites								
Lyda Camp Improvements							\$0	OHV and Road Crew project
Lyda Camp Information Board and Site Sign Fabrication and Installation			\$ 500				\$500	Materials costs. South Fork fabrication and installation.
Wilson River Dispersed Site Improvement								Dependent on crew capacity
Lyda Camp Portable Toilets						\$2,400	\$2,400	ATV Transfer, 5 months of service for two portables
Day Use Areas								
See Campgrounds							\$0	

RECREATION SITE MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2018

Date : 02/10/2017

Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Trailheads								
Bell Camp							\$0	
Deyoe Creek								
Four County Point								
Gales Creek								
Kings Mountain					\$2,700		\$2,700	Vault service
Rogers Camp					\$1,750	\$1,750	\$3,500	Vault service (3500) - split ODF and ATV Transfer
Storey Burn								
Summit								
University Falls - Information Board Fabrication and Installation			\$ 300				\$300	Infrastructure for trailhead expansion.
							\$0	
Interpretive Sites								
Gales Creek Overlook					\$450		\$450	Parking lot striping
Sunset Rest Area Interpretive Trail					\$300		\$300	Interpretive trail maintenance - bridge approach and trail surfacing rock
Sunset Rest Area Bridge Inspection					\$550		\$550	Bridge inspection on a 5 year inspection schedule
Other Operations								
Law Enforcement							\$0	WCSSO, TCSO, OSP Coordination. TCSO in Tillamook District budget
Dumpsite Clean-up					\$1,000		\$1,000	

RECREATION SITE MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2018

Date : 02/10/2017

Project	Construction Cost (Funding)		Improvement Cost (Funding)		Operations/Maint. (Funding)		Total Costs	Comments
	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)	ODF (\$)	Other (\$)		
Volunteer Program							\$0	Volunteer program support, recognition, and recruitment
Other Operations Expenses					\$50,000		\$50,000	Supplies and services for developed and dispersed facility operations - well testing, county well reviews, well maintenance, fee envelopes, dust abatement, hazard tree removal, abandoned vehicle removal, sign repair and replacement, invasive species and weed management, general operations supplies
District Total							\$77,550	
Other Total							\$20,650	
TOTAL							\$98,200	

RECREATION TRAIL MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year:

2018

Date : 02/10/2017

Project	Construction Projects			Improvement Projects			Operations & Maintenance Projects			Total Costs	Comments
	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)		
Non-Motorized											
Gravelle Brothers Trail - Sandshed Reroute				0.5	\$75					\$75	South Fork crew construction. Trail signs material cost (75)
Wilson River Trail Bridge #2 Railing Addition					\$1,350					\$1,350	Adding railing to address safety issues and to meet code requirements
Wilson River Trail Bridge #3						\$9,500				\$9,500	Adding 35 foot long glu-lam stringer bridge at existing open water crossing. Addressing year round use demand and safety and resource impact issues. RTP Grant
Maintenance Supplies								\$1,000		\$1,000	Bridge repair material, tools, supplies, signs, sign posts
Bridge Inspections										\$0	

Project	Construction Projects			Improvement Projects			Operations & Maintenance Projects			Total Costs	Comments
	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)	Miles	ODF (\$)	Other (\$)		
Motorized											
Chute Trail Bridge 1 Replacement						\$9,215				\$9,215	Remove old bridge and replace with a 35 foot glu-lam stringer bridge. RTP Grant for materials. OHV program staff to construct.
Kids Sand Pile Play Area Loop Trail Construction				0.25 to 0.5						\$0	Loop trail to be constructed by OHV program staff
Maintenance Supplies									\$1,000	\$1,000	Bridge repair material, tools, supplies, signs, sign posts. ATV Transfer
Bridge Inspections										\$0	
District Total										\$2,425	
Other Total										\$19,715	
TOTAL										\$22,140	

RECREATION GRANT MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2018

Date : 02/10/2017

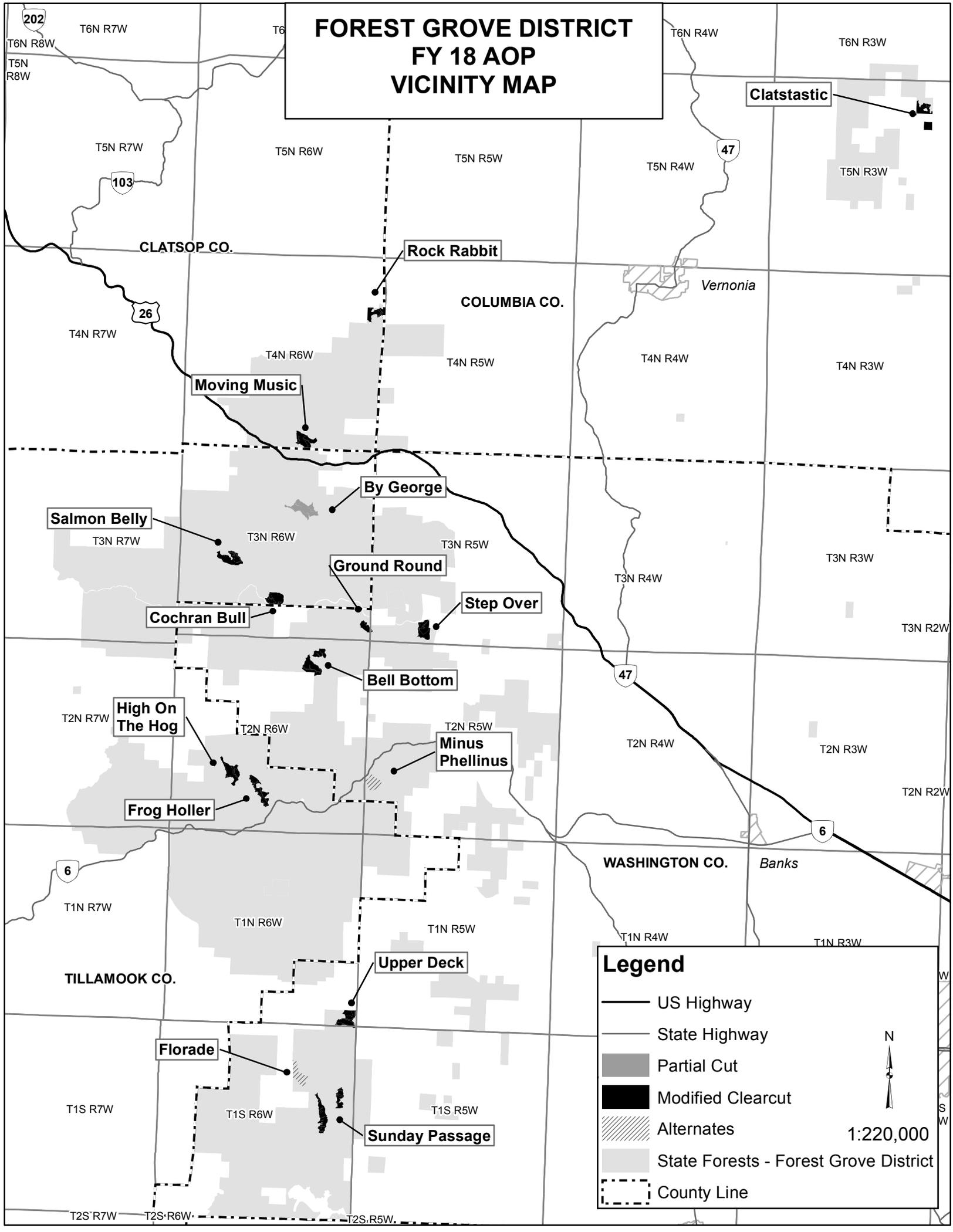
Grant	Status	Award Date (actual or anticipated)	Recreation Leadership Approval	Goals/Purpose	Funding		Project Total	Comments
					Grant (\$)	Match (\$)		
					\$0	\$0	\$0	
					Grants Total		\$0	
					Match Total		\$0	
					TOTAL		\$0	

Appendix B

Vicinity Maps

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

FOREST GROVE DISTRICT FY 18 AOP VICINITY MAP



Legend

- US Highway
- State Highway
- Partial Cut
- Modified Clearcut
- Alternates
- County Line

N

1:220,000

FY2018 RECREATION PROJECT VICINITY MAP

CLATSOP

COLUMBIA

26

Timber Rd

WASHINGTON

Gravelle Brothers Trail Sandshed Reroute

Wilson River Trail Bridge #2 Railing

Wilson River Trail Bridge #3

6

TILLAMOOK

Kids Sandpile Play Area Addition

Kings Mountain Trailhead Expansion

Chute Trail Bridge Replacement

Legend

— Forest Road

Highways

▬ US Highway

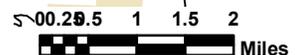
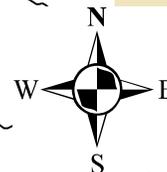
▬ State Highway

■ Oregon Dept of Forestry

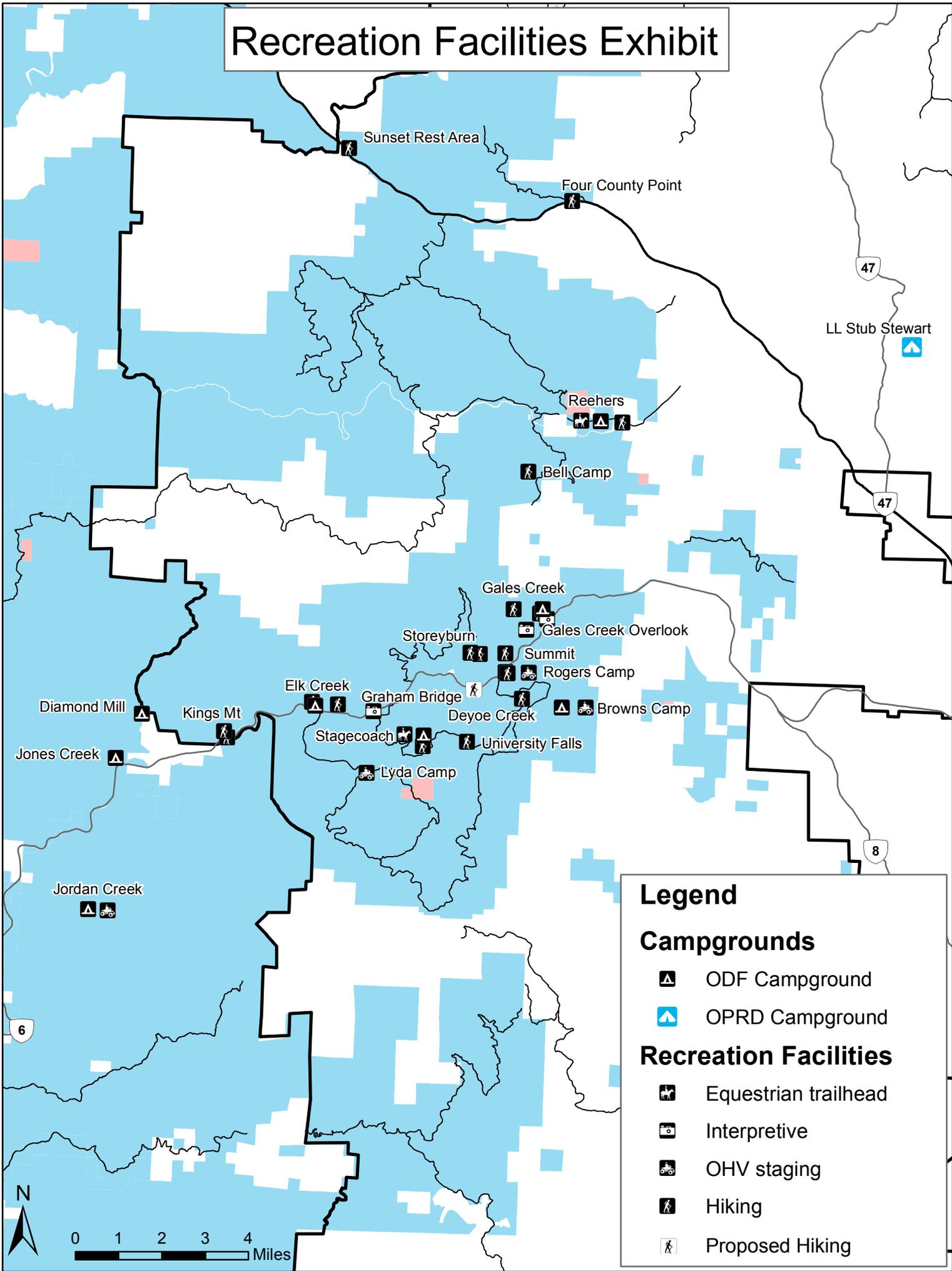
Scale

1:125,000

1 in = 2 miles



Recreation Facilities Exhibit



Appendix C

Consultations with Other State Agencies

Oregon Department of Fish and Wildlife (ODFW):

ODFW biologists attended a district field tour of the FY 18 AOP, a review meeting for resource specialists, and were provided the Summary and Pre-Operations Reports for review. No written comments were received.

Oregon Department of Transportation – Archaeologists:

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

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

- Potential Old Military Wagon Road and Old House: Ground Round sale
- Potential Trail: Cochran Bull sale
- Potential Trail and Cabin: Rock Rabbit sale.

Appendix D

PUBLIC COMMENT PROCESS FOR THE FY 2018 ANNUAL OPERATIONS PLAN

The Oregon Department of Forestry issued a Press Release in March 2017, announcing a formal public comment period for the FY 2018 Annual Operations Plans from March 20 through May 4, 2017.

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.

The Forest Grove District did not receive any comments regarding specific sales or activities within the FY 2018 AOP. One small change was made to Appendix C since the public review and is described below.

Some general comments were received and are summarized below along with responses.

- *There is no Department of Fish and Wildlife Biologist Review in Appendix C. Has a review taken place? -*

ODFW Biologists were present during a field tour of the Forest Grove FY 18 AOP and attended a resource specialist review meeting in January. They were sent the written Pre-Operations Reports and the AOP Summary Document. No written comments were received. Appendix C has been updated to reflect this.

- *Supplemental funding and alternative revenue sources need to be found for recreation budgets. –*

ODF is actively looking into alternative revenue sources and often pursues grants and partnerships to help pay for recreation projects.

- *Would like more shooting ranges. –*

The district is planning to add more sites. We are looking into partnerships and funding to help get this work done.

Appendix E

Pre-Operations Report

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

APPENDIX F

Forest Land Management Classification System (FLMCS) Major Change Notification

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

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

A major modification of the FLMCS is defined as one that cumulatively exceeds 500 acres within one year. The public comment period to review this modification was held between March 20 and May 4, 2017. No comments were received against the proposed changes of adding a new Northern Spotted Owl (NSO) site and adjusting the location of another NSO site to the Forest Grove FLMCS. The changes have been approved by the State Forester.

The following tables from the Forest Grove District Implementation Plan, 2011 have been modified to reflect these changes:

Table 2. Forest Grove District Acres, by Class and Fund

Classification	Board of Forestry	Common School	Administrative Sites	Total Acres*
High Value Conservation	20,044	76	0	20,120
Special Use	18,752	18	16	17,234
Focused	99,409	489	0	99,898
General	33,556	166	0	33,722

*The sum of the total acres is greater than the total acres within the District. This is due to the overlap between the High Value Conservation, Special Use and Focused classifications on the forest.

Table 3. Forest Grove District Acres, Focused, Special Use and High Value Conservation Subclasses

	Acres Focused	Acres Special Use	Acres High Value Conservation
Administrative Sites	0	112	0
Aquatic and Riparian Habitat	15,361	0	9,903
Cultural Resources	25	99	0
Deeds	0	0	0
Domestic Water Use	10,549	0	0
Easements	0	3	0
Energy and Minerals	0	80	0
Operationally Limited	0	16,313	0
Plants	0	0	574
Recreation	19,328	141	0
Research/Monitoring	441	203	0
Transmission	0	268	0
Visual	10,524	485	0
Wildlife Habitat	43,669	0	9,639



Oregon

Kate Brown, Governor

Department of Forestry

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

To: Liz Dent, State Forests Division Chief
Andy White, Northwest Oregon Area Director

From: Peter Daugherty, State Forester

Date: June 21, 2017

Subject: Approval of Major Modifications to Forest Grove and Tillamook Districts Forest Land Management Classifications.



"STEWARDSHIP
IN FORESTRY"

This letter conveys direction related to modifications of the Forest Land Management Classifications (FLMC) for Forest Grove and Tillamook Districts. Since the approval of these districts FLMC maps new information has been acquired that necessitates modifying the FLMC maps on these districts.

The modifications for Forest Grove District were needed to add a new Northern Spotted Owl (NSO) site established following the 2016 survey season and make minor refinements to the location of another existing NSO site. The modifications for Tillamook District were needed to update the FLMC maps based on changes that occurred in the past few years. These modifications consisted of adding two NSO sites, three marbled murrelet sites and making other refinements based on administrative changes.

A major modification is defined as one that cumulatively exceeds 500 acres within one year. Major modifications require a 30 day public comment period. This was conducted in conjunction with the district's 45-day 2018 Annual Operations Plan public comment period. One written comment was received that related to the Focused Stewardship Subclasses categories and did not pertain to how the FLMC modifications are being applied on these districts.

After reviewing the described changes in Appendixes F of the respective districts Annual Operation Plans, corresponding maps/data, the public input, the recommendations from the District Foresters and Area Director, I have found the modifications to be consistent with OAR 629-035-0055 and OAR 629-035-0060. Therefore, I am approving the modified FLMC maps for Forest Grove and Tillamook districts.

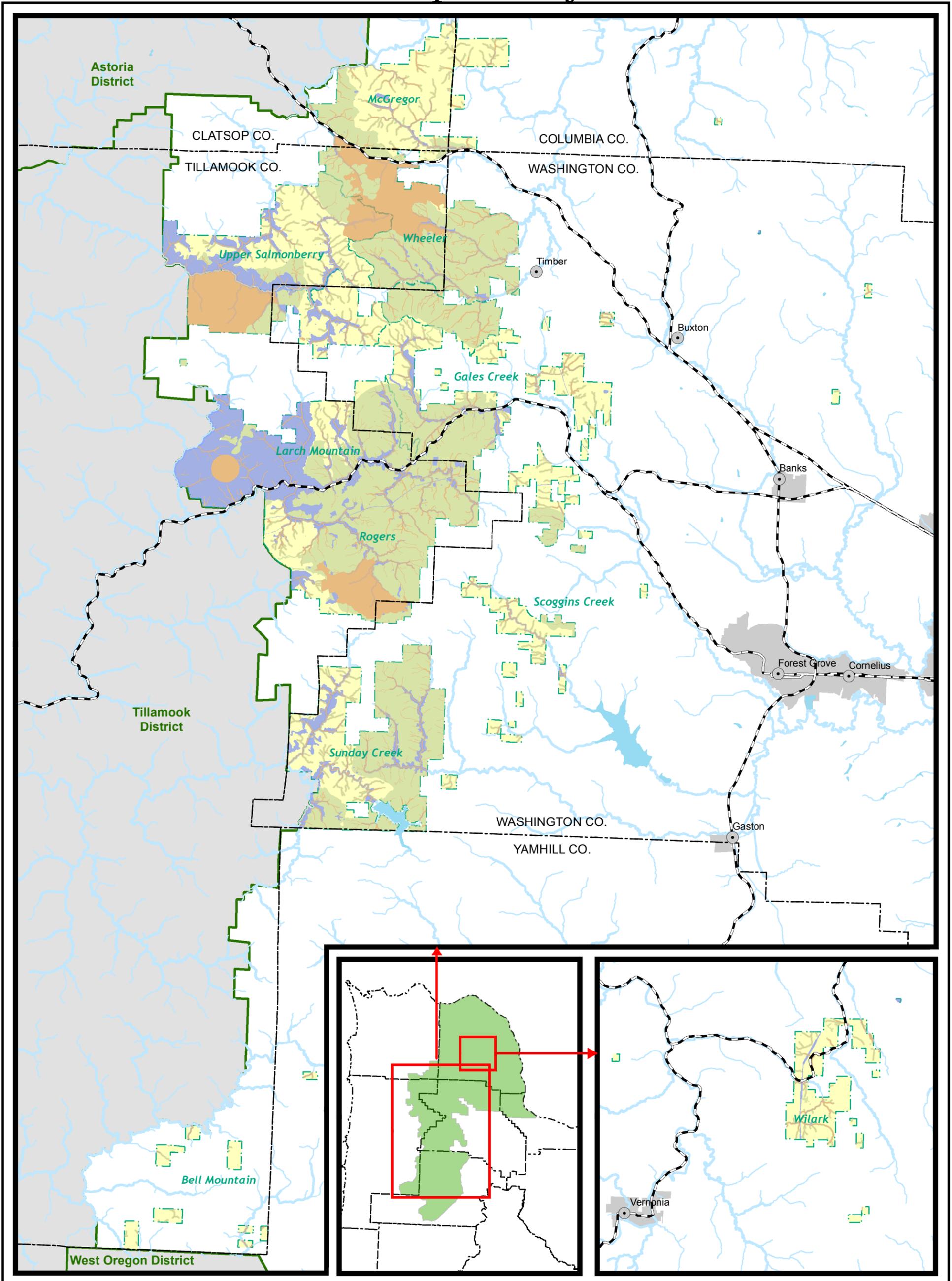
Sincerely,

Peter Daugherty
Oregon State Forester

Enclosures:

- (1) Appendix F - Forest Grove FY2018 Annual Operations Plan
- (2) Appendix F - Tillamook FY2018 Annual Operations Plans
- (3) Public comment from Leslie Shaw

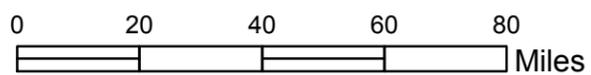
Forest Grove District Stewardship Classifications



Stewardship Classifications

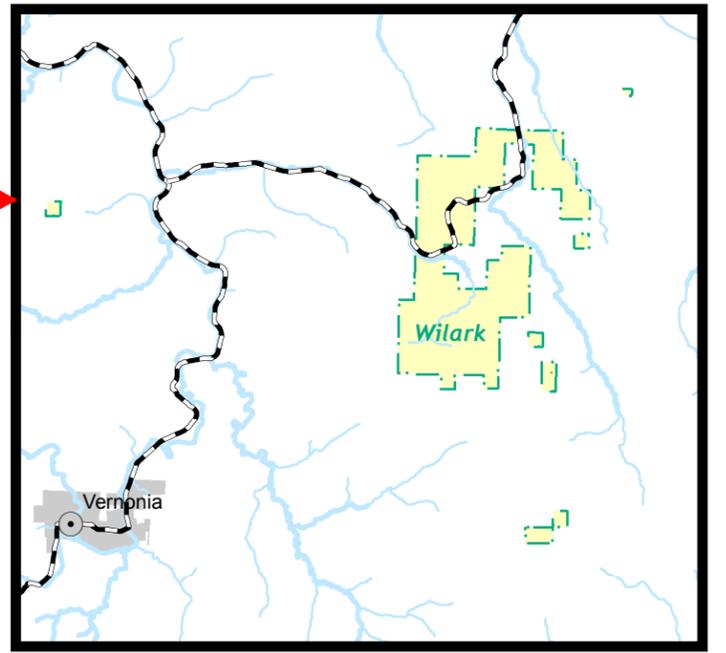
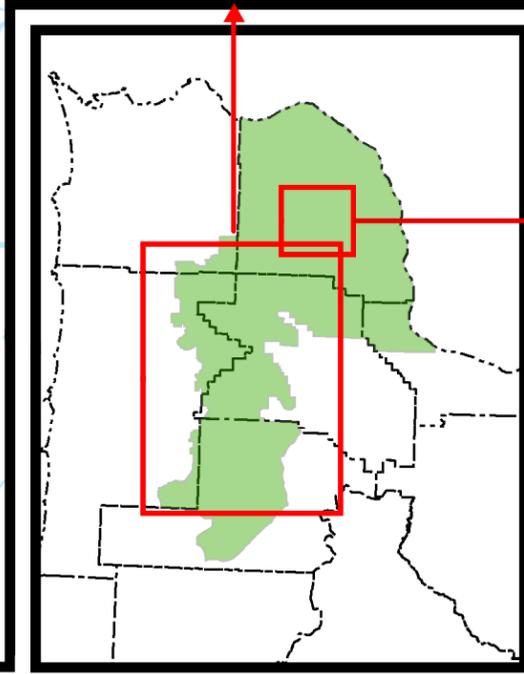
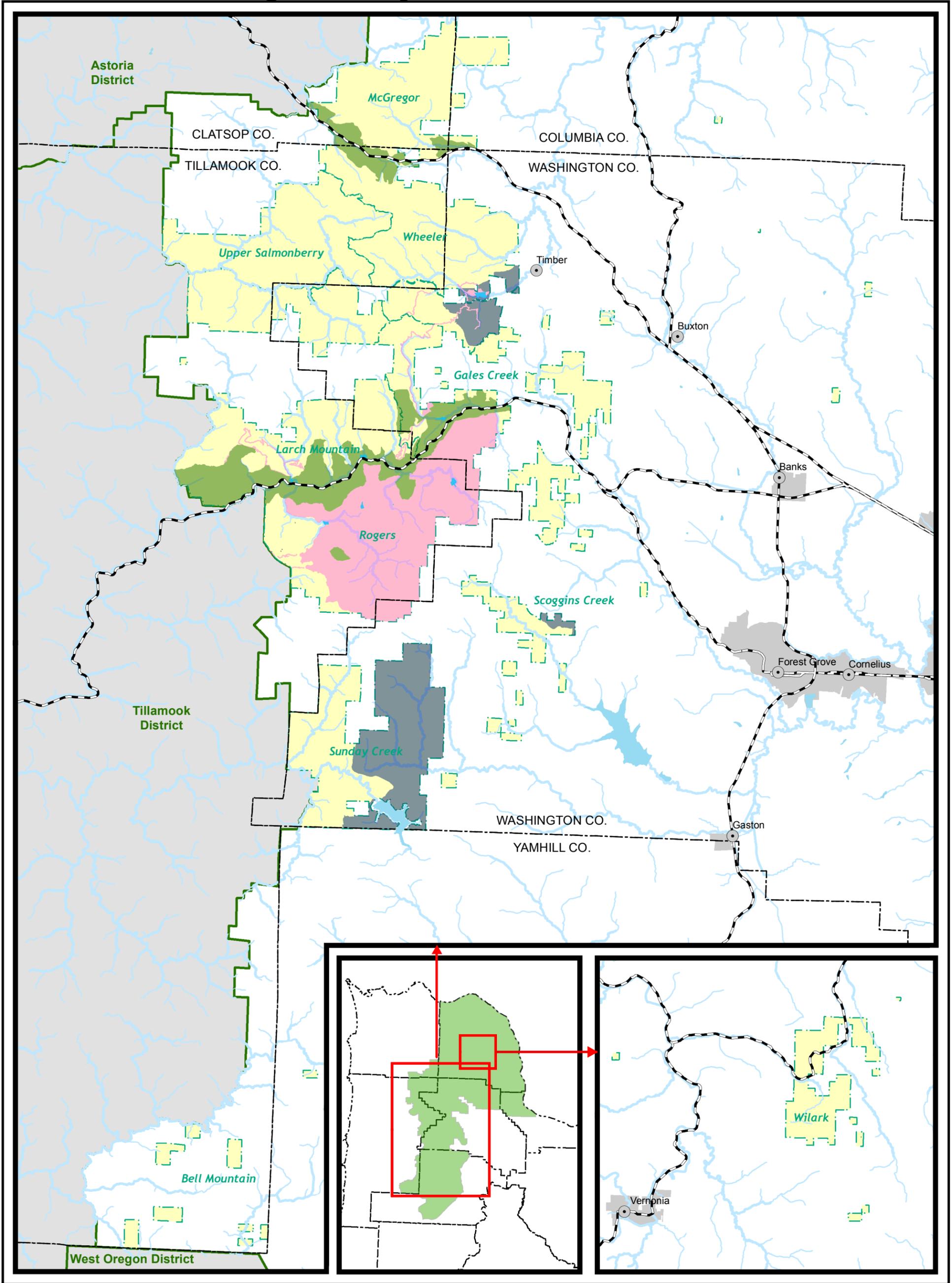
- High Value Conservation Area
- Special Use
- Focused

- Towns
- Highways
- Large Stream
- Medium Stream
- Management Basins
- Adjacent Districts



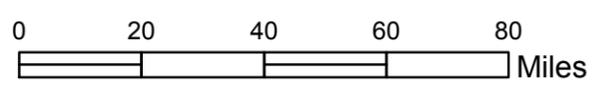
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Forest Grove District Stewardship Classifications - Social Subclasses



- Special Use**
- Recreation
 - Visual
-
- Focused**
- Domestic Water Use
 - Visual
 - Recreation

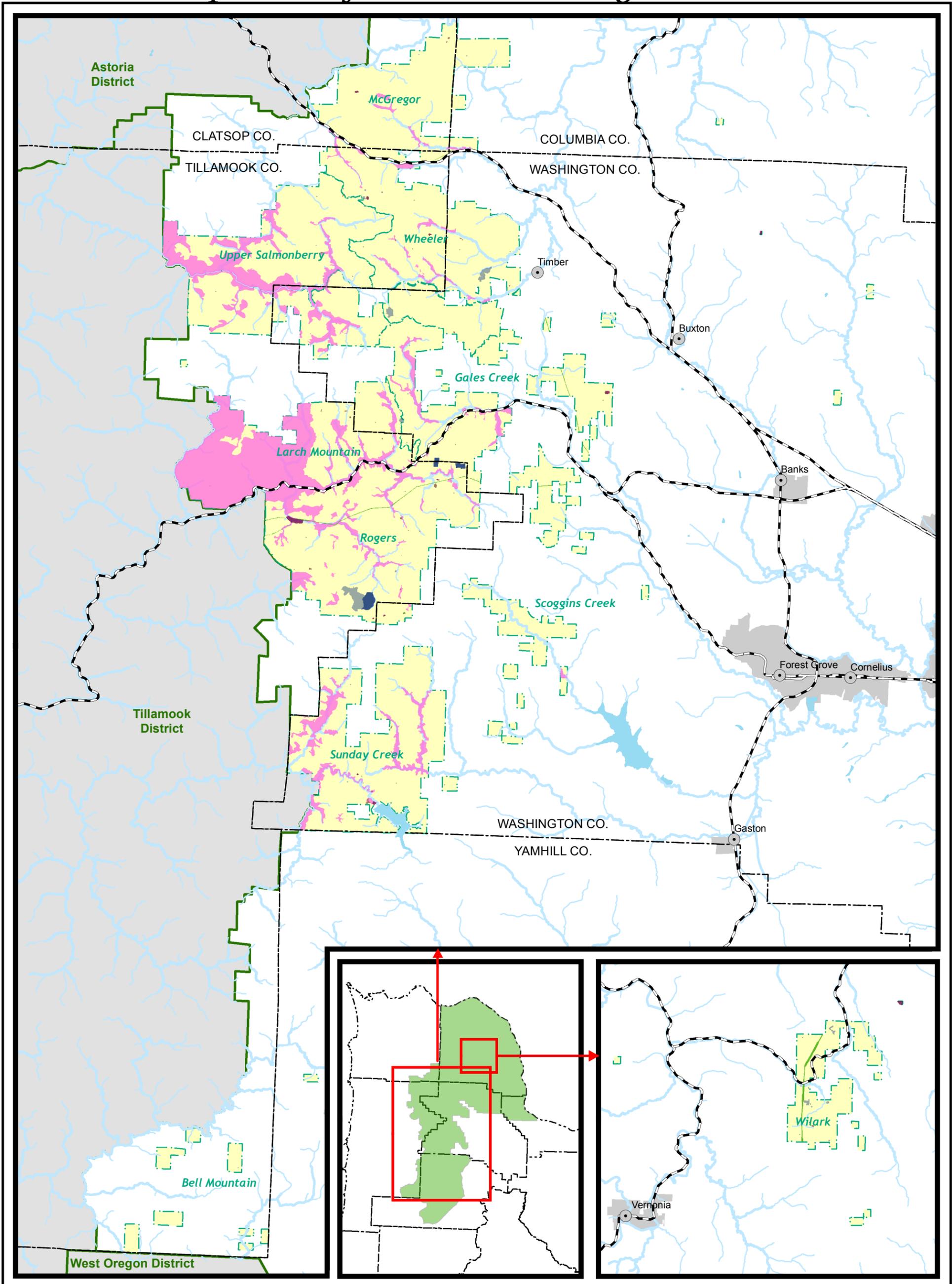
- Towns
- Highways
- Large Stream
- Medium Stream
- Management Basins
- Adjacent Districts



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Forest Grove District

Stewardship Classifications - Management Subclasses



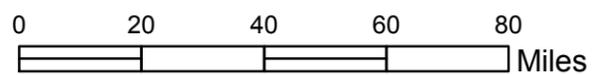
Special Use

- Administrative Sites
- Research/Monitoring
- Easements
- Transmission
- Energy and Minerals
- Operationally Limited

Focused

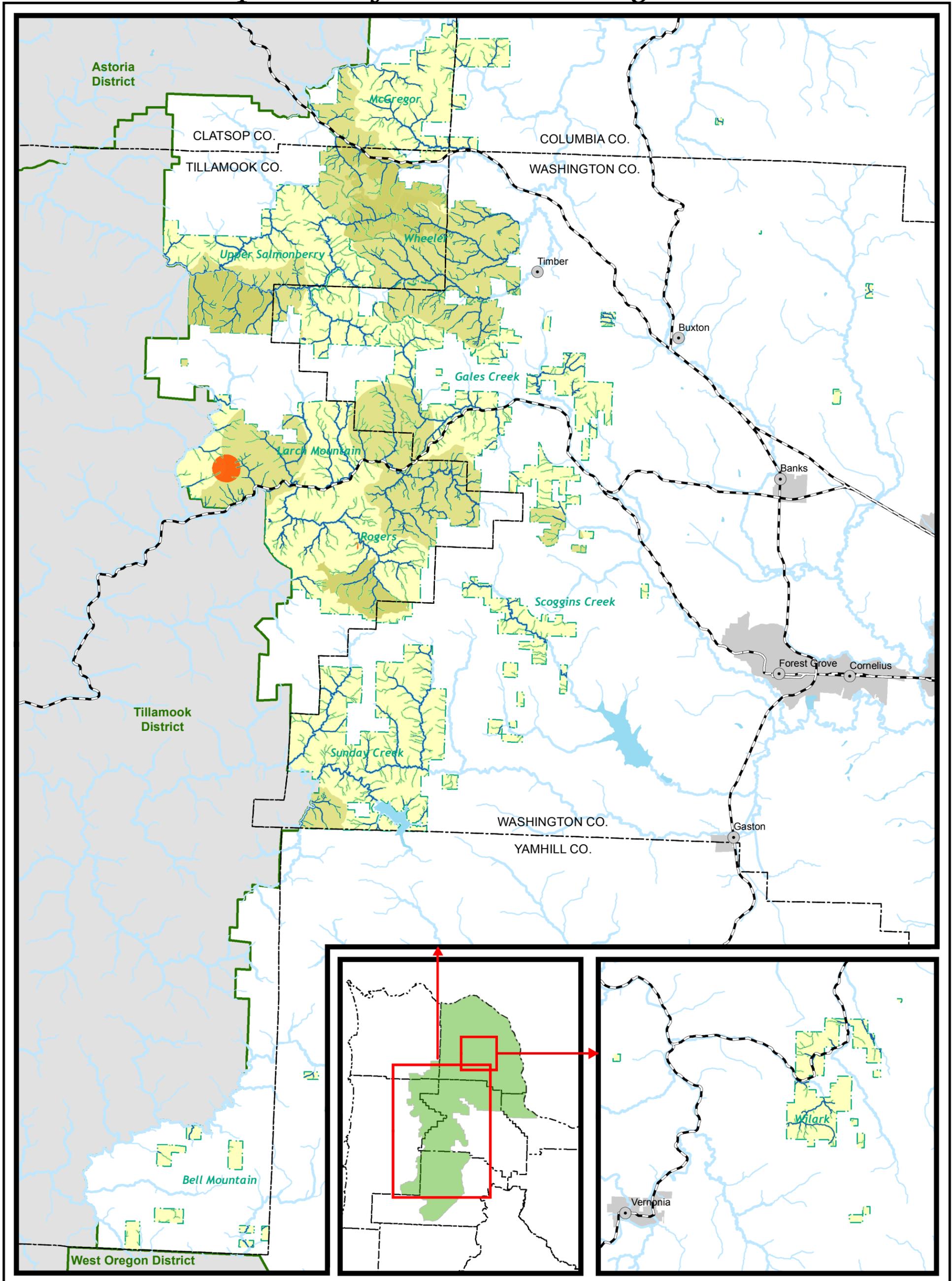
- Research/Monitoring

- Towns
- Highways
- Large Stream
- Medium Stream
- Management Basins
- Adjacent Districts



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Forest Grove District Stewardship Classifications - Biological Subclasses



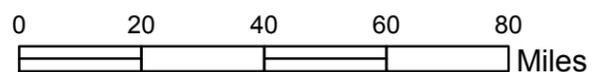
High Value Conservation Areas

- Aquatic and Riparian Habitat
- Unique, Threatened or Endangered Plants
- Wildlife Habitat

Focused

- Plants
- Aquatic and Riparian Habitat
- Wildlife Habitat

- Towns
- Highways
- Large Stream
- Medium Stream
- Management Basins
- Adjacent Districts



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