

**FOREST GROVE  
DISTRICT  
2016 ANNUAL  
OPERATIONS PLAN**



# FOREST GROVE DISTRICT

## 2016 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 2016. 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.

Over the next two months, ODF will request review and comments on our plan from others, including Washington County Commissioners, 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.

During this time, we want to hear your feedback, suggested revisions. In addition, any *thank you* messages to staff and volunteers are welcomed and appreciated. Thanks in advance for your review and engagement.

### **A short summary of activities planned for the coming year:**

- Planting 494,600 trees on 1,250 acres and conducting vegetation and animal management activities on an additional 3,100 acres to ensure the survival and growth of these plantations.
- Conducting over 4,500 individual surveys for northern spotted owls and 35 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 suggests that Carlson Creek and North Fork Lousignont Creek near planned harvest units could benefit from large wood additions to the stream system. These streams will be reviewed in the field by ODF's Aquatic and Riparian Specialist and ODFW for potential projects during sale layout.
- Habitat development projects such as creating snags by removing the tops (over 1,000 planned this year), retaining green trees in clearcut areas, and leaving down wood, all for wildlife benefits in harvest areas and future forests.
- Maintaining 120 miles of road and improving approximately 45 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 58.1 million board feet of timber volume, through modified clearcut and partial cut harvest, generating revenue of an estimated \$22 Million. 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, picnicking, target shooting, swimming, mushroom picking, etc.

- Maintaining, managing, and patrolling the 101 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 managing and maintaining recreation opportunities on the forest through the following volunteer programs:
  - Camp Hosts, Adopt a Trail and Trail Patrol
  - Forest Clean-up
  - Trail Maintenance and Construction Work Parties
  - OHV Trail Equipment Volunteer Operator
- Administering and supporting 10 to 12 organized trail use events and 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 2014.
- 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 2016 (FY16), which begins July 1, 2015 and ends June 30, 2016. 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.

In 2013, the Board of Forestry directed the State Forests Division to develop a new forest management plan to replace the current NW Oregon Forest Management Plan. The new plan is under development and may be adopted in the fall of 2015, during the implementation of this annual operating plan. The strategies in the new plan have not been fully developed but will likely be different than those in current forest management plans, and so some planned activities in this annual operating plan may need to be revised to align with the new forest management plan. Some of the changes may be minor, such as a change in the width of a riparian area or in the number and location of green trees retained in clearcuts. Other changes may be more significant, such as changing a partial cut to a clearcut. Finally, the new FMP may result in increased harvest levels. This will be addressed by moving one or more of the Alternate Operations into Primary Operations.

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.

The proposed operations and activities are planned to be designed, engineered, and submitted for processing during the FY16 time period. Actual on-the-ground operations will likely not occur during FY16 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 FY2016.

A 45-day public comment period will be held from April 6, 2015 through May 20, 2015. The District Forester will review and consider any comments received during this period and make any changes or modifications that are determined to be necessary, prior to approving the AOP.

In addition to describing forest management activities for FY 2016, Appendix A of this AOP also describes major changes\* to the State Forests' Forest Land Management Classification maps.

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 OAR 629-035-0060

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

# **INTEGRATED FOREST MANAGEMENT OPERATIONS**

## **Timber Harvest Operations**

### **Overview of Timber Harvest Operations**

The FY16 AOP is estimated to produce 58.1 million board feet in volume, generate gross revenues of approximately \$24,386,830 and net revenues of \$22,495,130. 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 58.1 million board foot (MMBF) volume is below the target of 61 MMBF in the IP. The FY 2015 AOP contract volume accomplishment exceeded the planned volume by 6 MMBF, therefore FY 16 AOP planned volume has been reduced in accordance with the FY 2016 AOP Guidance. 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 B, Table B-1) and vicinity map (Appendix C) 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 archaeologists 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 D.

**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		2016 AOP Objective
	Low	High	
Partial Cut Harvest	850	3,450	901
Regeneration Harvest	300	1,300	1,155

Table 1 shows the proposed acres by harvest type<sup>1</sup>. The 1,155 acres of regeneration harvest planned for FY16 represents one percent of the district. Of the 1,155 acres planned for regeneration harvest, 100 percent will be designed as modified clearcuts. Of the 901 acres of partial cut, 17 percent are planned for light partial cut and 83 percent are planned for moderate 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 B-1 in Appendix B, while a vicinity map of these harvest operations can be found in Appendix C.

<sup>1</sup> The definitions of the harvest types used to describe timber harvesting on State Forests can be found on the [State Forests website](#) under Forest Management and Planning. Briefly, a Modified Clearcut is the most common of three type of Regeneration Harvest (or clearcut) that may occur on State Forests. The defining characteristics of Modified Clearcuts are that they meet the structural component standards of the FMP (green tree, snag, and down wood).

## 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 made significant contributions to snag and DWD levels despite the salvage of some large concentrations and roadside 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 1,112 manmade snags will be created with this AOP. All snags will be created by tree topping.

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. All regeneration harvest units are expected to provide approximately 750 cubic feet per acre of Class 1 and 2 DWD upon completion of harvest.

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.

### Minor Landscape Design Modifications

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

Listed in Table 2 is a summary of the minor changes that were made during the planning for this AOP. All changes were reviewed by ODF Resource Specialists and ODFW. The total acres of complex DFC on the district is still 30 percent as required by the current Implementation Plan.

**Table 2. Minor Landscape Design Modifications**

Operation/Unit	Modification	Acres Added to Complex	Acres Removed from Complex
Nehalem Breaks	Complex to general	0	14
Whirling Derby	Complex to general	130	84
<b>Total Change</b>		<b>130</b>	<b>98</b>

### Modification Summaries

**Nehalem Breaks:** The district is proposing to change 14 acres within the sale which currently have a DFC of Older Forest Structure to a DFC of non-complex or “general”. This piece of ground makes a logical harvest boundary and a financially viable addition to the timber sale.

**Whirling Derby:** The district is proposing to change 84 acres that have a current DFC of Older Forest Structure to non-complex or “general”. These stands are almost pure Douglas-fir stands and the district believes that performing a partial cut or multiple partial cuts within these areas will not move these stands toward a complex structure. This area was reviewed in the field with various ODF & ODFW resource specialists. The district has chosen 130 acres of stands (also reviewed in the field with ODF & ODFW resource specialists) that contain multiple tree species and are capable of becoming complex structure to move from a DFC of non-complex to Older Forest Structure. This new complex designation would expand upon an area that already has a DFC of Older Forest Structure and will also replace those acres of complex lost from the DFC changes proposed with the Nehalem Breaks sale mentioned above.

## **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 Site (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 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 summarizes harvest operations within the TAS proposed in the FY 2016 AOP and the cumulative operations in TAS since the strategy was adopted (AOPs 2012 through 2016). One operation is proposed within the Wolf Creek TAS for the FY 2016 AOP. 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 2016)		Cumulative Harvest (Since FY 2012)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
<b>AOP Acres</b>	1,155	901	5,349	5,830
% of District Acres	1%	1%	4.7%	5%
<b>South Fork Wilson (2,081 ac)</b>	0	0	0	0
% of Acres	0%	0%	0%	0%
<b>Upper Salmonberry (3,097 ac)</b>	0	0	0	365
% of Acres	0%	0%	0%	11.7%
<b>Wolf Creek (4,203 ac)</b>	0	151	0	378
% of Acres	0%	3.6%	0%	9%
<b>All TAS (9,381 ac)</b>	0	151	0	743
% of Acres	0	1.6%	0%	7.9%

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 2016)		Cumulative Harvest (since FY 2014)	
	Clearcut	Partial Cut	Clearcut	Partial Cut
<b>AOP Acres</b>	1,155	901	3,263	3,009
% of District Acres	1%	1%	2.8%	2.6%
<b>Aquatic Anchor (AA) Basins</b>				
<b>Ben Smith Creek (2,410 ac)</b>	0	0	0	0
% of Acres	0%	0%	0%	0%
<b>Devils Lake Fork Wilson River (6,132 ac)</b>	0	0	302	118
% of Acres	0%	0%	4.9%	2%
<b>Elkhorn Creek (1,049 ac)</b>	0	0	0	0
% of Acres	0%	0%	0%	0%
<b>Lousignont Creek/Upper Nehalem River (12,355 ac)</b>	248	634	596	1,351
% of Acres	2%	5.1%	4.8%	10.9%
<b>S. Fork Salmonberry River (5,659 ac)</b>	0	0	77	260
% of Acres	0%	0%	1.3%	4.6%
<b>Upper Rock Creek (3,295 ac)</b>	0	0	0	0
% of Acres	0%	0%	0%	0%
<b>All Aquatic Anchors (30,900 ac)</b>	248	634	975	1,729
% of Acres	1%	2%	3.2%	5.6%

### Summary of Timber Harvest Operations by Basin

In the following section, the harvest operations planned for FY16 will be summarized in the context of the eleven management basins on the Forest Grove District. 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.

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

Basin	2016 AOP	
	Partial Cut	Clearcut
Bell Mountain	0	0
Isolated Tracts	0	70
Gales Creek	0	282
Larch Mountain	0	0
McGregor	0	338
Rogers	0	111
Scoggins Creek	0	105
Sunday Creek	237	0
Upper Salmonberry	0	0
Wheeler	664	249
Wilark	0	0

### **Bell Mountain Basin**

No harvest operations are planned for this basin.

### **Isolated Tracts Basin**

Gales 80: This is a 70 acre modified clearcut. The stands within this sale consist of 60 to 65 year-old Douglas-fir trees. The sale will be replanted with Douglas-fir seedlings with minor amounts of western hemlock and western red cedar seedlings. The DFC for this sale is for non-complex stands. There is a domestic water use intake downstream from this sale which will be protected in accordance with the Forest Practices Act requirements. Streams within this sale drain into Gales Creek and Godfrey Creek. Approximately 0.4 miles of spur roads will be constructed to access and aid in harvesting this sale. These roads will remain open for a period of time following the harvest for reforestation activities. Approximately 1.2 miles of road will be improved with this sale.

### **Gales Creek Basin**

Gales Back Pocket: This is a 99 acre modified clearcut. The mixed conifer stands within this sale are 65 years-old. The sale contains areas infected with the root disease *Phellinus weirri*. The sale will be replanted with a mixture of western hemlock, western red cedar and red alder seedlings. Douglas-fir seedlings will be planted within areas where no root disease is present. The DFC for this sale is for non-complex stands. The streams within this sale drain into the South Fork Gales Creek. Approximately 0.7 miles of road will be constructed to facilitate the harvest of this sale. These spur roads will remain open following the harvest activities to be used during reforestation of this sale.

Two Storeys: This is a 103 acre modified clearcut divided between two sale areas. The stand within the sale consists of 62-year-old Douglas-fir. The sale has a DFC of non-complex. The root disease *Phellinus weirri* is present within this sale. This sale will be reforested with a mixture of western hemlock, western red cedar, and red alder. Douglas-fir trees may be planted in pockets where *Phellinus weirri* is not present. There is a hiking trail adjacent to Area 2. The sale boundary will be at least 50 feet from the hiking trail. The marketing unit and

recreation unit will work collaboratively during sale layout and contract writing to ensure trail protection. Streams within this sale flow into Gales Creek. Approximately 0.9 miles of spur road will be constructed and 0.7 miles of road will be improved with this sale.

Cat's Meow: This is an 80 acre modified clearcut. The stand within the sale consists of 75 year-old Douglas-fir trees. The sale has a DFC of non-complex. The sale will be replanted with mostly Douglas-fir seedlings mixed with western hemlock and western red cedar. There is a transmission line owned by Bonneville Power that runs through a portion of the sale. Extra planning and care will be taken while harvesting near these lines.

### **Larch Mountain Basin**

No harvest operation is planned within this basin.

### **McGregor Basin**

Clear Head: This is a 181acre modified clearcut divided among three separate areas. The Douglas-fir stands within the sale range from 56 to 76-years-old. The DFC for these stands is for non-complex stands. The sale areas will be replanted with a mixture of Douglas-fir, western hemlock and western red cedar seedlings following the completion of harvest. The streams within this sale drain into South Fork Clear Creek. Approximately 0.3 miles of spur road will be constructed to facilitate harvest of this sale. This road will remain open following harvest to aid in the reforestation of this sale. Approximately 3.5 miles of road will be improved as part of the project work associated with this sale.

Rusty Rope: This is a 157 acre modified clearcut divided among two separate sale areas. The stands within this sale consist of 70 to 76-year-old Douglas-fir stands. The DFC for these stands is for non-complex stands. The sale areas will be replanted with a mixture Douglas-fir, western hemlock and western red cedar seedlings. The streams within this sale flow into North Fork Wolf Creek. Approximately 1 mile of spur roads will be constructed and 12 miles of roads will be improved with this sale.

### **Rogers Basin**

Shining C: This is a 111 acre modified clearcut divided between two sale areas. Stands within this sale consist of 65 year-old Douglas-fir trees. The DFC for this sale is for non-complex stands. The sale areas will be replanted with Douglas-fir, western hemlock and western red cedar seedlings following harvest. The streams within this sale are one mile upstream of the South Fork Wilson River. Approximately 0.8 miles of spur roads will be constructed and one half mile of road will be improved as part of this sale.

### **Scoggins Creek Basin**

Dodgin' Scoggins: This is a 105 acre modified clearcut. The stands within this sale consists of 60 to 65-year-old Douglas-fir. The DFC for this sale is for non-complex stands. The sale will be replanted with Douglas-fir, western hemlock and western red cedar seedlings following harvest. The streams within this sale flow into Scoggins Creek. Approximately 0.8 miles of spur road will be constructed with this sale.

## **Sunday Creek Basin**

**Blind Ambition (ALT):** This is a 116 acre modified clearcut. The Douglas-fir trees within the sale are 58-years-old. The sale has a DFC of non-complex. The sale will be replanted with mostly Douglas-fir seedlings mixed with western hemlock and western red cedar. The streams within this sale flow into the Tualatin River. Approximately 5 miles of road would be improved with this sale.

**Sunday Punch:** This is a 237 acre moderate partial cut. This is a first entry partial cut of the 40 to 50-year-old Douglas-fir stands that make up this sale. The sale has a DFC of non-complex stands. The thinning prescription is designed to improve the growing conditions within the sale area. Streams within this sale flow into Sunday Creek. Approximately one half mile of spur road and one half mile of collector road will be constructed and 7.3 miles of roads will be improved as part of this sale.

## **Upper Salmonberry Basin**

**Nor Sam (ALT):** This is a 358 acre moderate partial cut divided between two separate sale areas. Approximately half of the 50 to 60-year-old mixed Douglas-fir and western hemlock stands that make up this sale were thinned previously in 2001. The DFC for this sale is for complex stands. The thinning prescription is designed to maintain and enhance the development of the stand towards a more complex and biologically diverse stand commonly associated with older forests. The streams within this sale flow into the North Fork Salmonberry River. Approximately 15 acres of this sale are located within the South Fork Salmonberry River Aquatic Anchor, however, no streams are located within these 15 acres. Approximately 0.8 miles of new road construction and 4.5 miles of road improvement are associated with this sale.

## **Wheeler Basin**

**Catch and Release:** This is a 513 acre moderate partial consisting of six separate harvest areas. This is a first entry partial cut of the 30 to 40-year-old Douglas-fir stands that make up this sale. The DFC for this sale is mostly non-complex stands. There is a 73 acre portion of Area 4 that has a DFC of complex stands. The thinning prescription is designed to improve the growing conditions within the sale. Streams within this sale drain into Lousignont Creek, North Fork Lousignont Creek, Carlson Creek and Nehalem River. The entire sale is located within the Lousignont Creek/Upper Nehalem River Aquatic Anchor. The district is currently working with an ODFW biologist and the ODF water resource specialist on a potential stream enhancement project on either Carlson Creek or the North Fork Lousignont Creek which may be implemented with this sale. An approximately 0.5 mile section of Carlson Creek Road will be vacated and 0.4 mile of road will be constructed to in order to relocate this section of Carlson Creek Road away from a stream that the road is currently running parallel to. Approximately 8 miles of road will be improved with this sale.

**My Mulligan (ALT):** This is a 110 acre modified clearcut. This sale is located within a 76-year-old mixed Douglas-fir and western hemlock stand. The DFC for this sale is for non-complex stands. After harvest, the areas will be replanted with a mixture of Douglas-fir, western hemlock and western red cedar seedlings. Streams within this sale flow into Lousignont Creek. This sale is located within the Lousignont/Upper Nehalem River Aquatic Anchor. The small

perennial non-fish bearing streams within the sale will be protected with 50 foot no harvest buffers as per AA strategies. No new road construction or road improvement projects are planned at this time.

Nehalem Breaks: This is a 145 acre modified clearcut separated into six harvest areas. The Douglas-fir stands within this sale range from 58 to 87-years-old. The DFC for this sale is for non-complex sales. Following harvest, the sale will be reforested with Douglas-fir seedlings with minor amounts of western hemlock and western red cedar seedlings. Streams within the sale drain into Derby Creek and the Nehalem River. The sale is located within the Lousignont/Upper Nehalem River Aquatic Anchor. The fish bearing streams adjacent to and within the sale areas will be protected by a 100 foot no harvest buffer and the small perennial non-fish bearing streams will be protected by a 50 foot no harvest buffer as per AA strategies. Approximately one mile of spur road will be constructed and 2.7 miles of road will be improved as part of this sale. The Gales Creek hiking trail is immediately adjacent to Area 6. The district marketing unit and recreation unit will work collaboratively during sale layout and contract writing to ensure trail protection.

Piggy Back: This is a 151 acre light partial cut. The stands within this sale are mixed Douglas-fir and western hemlock stands between 70 and 80-years-old. The DFC for this sale is complex stands. This sale is located within the Wolf Creek Terrestrial Anchor site. This second entry light silvicultural prescription in these stands shall be designed to maintain or enhance the biological diversity of the stand. Western hemlock, noble fir and western red cedar trees will be reserved from harvest. Patches of 25-year-old alder and western red cedar within the sale will not be thinned. Over time it is expected that the stands within this sale will develop into multi-layer, biologically complex stands containing the structural components commonly used by wildlife species associated with older forests. This sale is also located within the Lousignont/Upper Nehalem River Aquatic Anchor. Approximately 0.2 miles of spur road will be constructed and 3.3 miles of road will be improved as part of this sale.

Whirling Derby: This is a 104 acre modified clearcut. The mixed Douglas-fir and western hemlock stands within this sale are 58-years-old. The DFC for this sale will be non-complex stands after the minor landscape design modification described previously within this plan. Following harvest, the sale will be reforested with Douglas-fir and minor amounts of western hemlock and western red cedar seedlings. The sale is located within the Lousignont/Upper Nehalem River Aquatic Anchor. The fish bearing stream adjacent to the sale will be protected by a 100 foot no harvest buffer and the small perennial non-fish bearing streams will be protected by a 50 foot no harvest buffer as per AA strategies. Approximately 0.5 miles of new spur road will be constructed and 5.2 miles of road will be improved as part of this sale.

### **Wilark Basin**

No harvest operations are planned within this basin.

## **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 with a few under-standard roads: in total approximately 700 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, width, and alignment. Drainage structure improvement continues District wide. There are still a few roads that are a legacy from those earlier decades and need improvement, access restriction, or vacating.

Almost all of the road work in this AOP is related to constructing spur roads and for improving haul routes for the FY16 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 Table B-4.

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, 8.2 miles of road will be constructed, and 44.7 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. Of the new construction in this AOP, 7.8 miles will be spur roads (12 foot surfaced width). 0.4 miles of Carlson Creek Road (collector) has been identified as a good candidate to relocate due to its close proximity to a seasonal stream. 0.4 miles of existing road will be vacated and an alternate route will be constructed further away from the stream.

There are 8.2 miles of new rock construction in the AOP. Construction costs are estimated at \$570,400. 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 44.7 miles of road will be improved as part of the FY 16 primary timber sales.

The majority of this improvement work will be performed on collector and spur roads and will consist of installing new cross drains and disconnect culverts, replacing culverts, ditchline improvements, and new surfacing. Improvement costs are estimated at \$1,115,900.

## **Road Access Management**

Approximately 0.9 miles of road will be vacated or blocked as part of timber sales in this years' AOP. Upon completion of logging, 0.4 miles of existing rocked collector roads will be vacated, 0.2 miles of dirt legacy roads will be vacated, and 0.3 miles of dirt legacy 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.

One gate will be installed with this AOP to help manage access to Two Storeys. Access management is needed due to current trash dumping issues and target shooting issues.

Total road vacating and blocking projects are estimated at \$3,000.

## **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.

## **Land Surveying**

There has not been an active land survey program on the District for a number of years. Fortunately, many of our neighbors have been surveying, and have marked property boundaries. For the FY 16 AOP, property lines need to be examined in the field to determine the status of the lines for the Catch and Release, Nehalem Breaks, Cat's Meow, Gale's Back Pocket, and Gales 80 sales.

## **Young Stand Management**

### **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 one sale that offers an opportunity for broadcast burning in FY16; a portion of the Wiggle Worm timber sale for a total of 40 acres. This represents a portion of the unit that has favorable burn boundaries conducive to cost effective site prep and 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 2014 and 2015 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 6 units that may need some amount of mechanical site preparation, up to 275 acres, which is included in the timber sale contract. These sales 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 650 acres on seven harvest units. The actual site preparation plan will be prepared in late spring when harvest unit availability and brush development is better known. Most chemical site preparation is completed by helicopter spraying. Some smaller areas will be done using ground methods where aerial application is not cost effective or to protect adjacent ownership or specific resources (i.e. water).

## 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 FY16. All of these sites will be planted to allow for the establishment of stands that can be managed to provide complex structure. Douglas-fir stock will compose 70%-85% of 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. 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.

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 2015, surveys will be conducted to determine interplanting needs for the 2016 planting season. The current estimate is 150 acres, based on historical averages.

3) Underplanting: None planned in FY16.

## **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 2015 to determine treatment needs for FY16.

Manual: The current estimate is 100 acres, based on historical averages.

Chemical: The current approach is to skip the implementation of an aerial release project for FY 2016. Release work accomplished in the summer of 2014 should have “caught us up” with competing vegetation concerns. Any areas that show development of unacceptable levels of competing vegetation will either be deferred until FY2017, or will be treated on the ground by hand.

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 will be 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, which is present in significant quantities pre-harvest. They are the Two Lou’s and Gale Force timber sales, totaling 199 acres.

## **Tree Protection**

Deer and elk, as well as mountain beaver, can heavily damage young stands and prevent meeting FMP 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 used to 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 30 acres of new tube installation and maintenance will be required with the FY16 planting for protection of cedar. The bulk of this is located in micro-sites well suited to cedar or in pockets of *Phellinus weirii* (root rot) delineated in harvest units. The need for mountain beaver trapping has been projected on approximately 600 acres. Heavy populations are being trapped in harvest units prior to planting.

### **Pre-commercial Thinning (PCT)**

Considerable acres of PCT were accomplished in the 2011 and 2012 fiscal years utilizing American Recovery and Reinvestment Act dollars. We got “ahead of the game” by thinning some stands slightly early. The current approach is to defer through FY2016, however, new stands are developing that could benefit from PCT in the near future.

### **Fertilization**

Budget constraints in FY2016 eliminate the consideration of any fertilization.

### **Pruning**

No pruning is planned for FY2016 beyond Western white pine for disease prevention of blister rust. Approximately 50 acres are anticipated.

## **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 2016**

#### **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 FY2015 operating season. The following table lists the developed facility projects for FY 2016.

<b>Project Type</b>	<b>Project Name</b>	<b>Work Resources</b>	<b>Project Description</b>
Facility Improvement	Elk Creek Trailhead Parking Area Expansion	ODF District Road Crew and South Fork Inmate Crew	Project work will involve improvement of ¼ mile of road, construction of a parking area to accommodate 20 to 24 vehicles, construction of ¼ mile of new trail, and installation of associated signs.
Facility Improvement	Picnic Table Replacement	Contractor / South Fork	Replacement of 5 picnic tables in Browns Camp OHV Campground and staging area and 24 picnic tables at Gales Creek Campground. Project work consists of purchasing materials from local providers and working with South Fork to fabricate and install the tables. The new tables will replace failing tables most of which were installed more than 15 years ago.
Facility Improvement	Storage shed roof replacement	District Staff / Contractor	Project work will consist of replacing the worn cedar shake roof on the storage shed at the camp host site at Gales Creek Campground with a new fire safe metal roof.
Facility Improvement	Sunset Rest Area Single Panel Information Board Replacement	District Staff / South Fork	Project work will consist of removing the existing single panel information board and replacing it with a new structure consistent with current design guidelines.
Facility Improvement	Three Panel Information Board Upgrade	District Staff / Contractor	This project consists of replacing the vertical posts on four of our three panel information board structures (as needed) and setting the vertical posts up on concrete footings.

## **Dispersed Use**

Each year, an extensive 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 2016 and will require varying degrees of District staff attention. Dispersed use sites will be monitored and maintained, as resources allow, to meet safety and sanitation objectives.

## **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.

2016 OHV trail projects are identified and described in the following table. (Table 6)

**Table 6. OHV Trail Projects**

<b>Project Type</b>	<b>Project Name</b>	<b>Project Mileage</b>	<b>Work Resources</b>	<b>Project Description</b>
Planning	#21 Chute Trail Bridge Replacement	-	District Staff / Resource Specialists	Project work will include integration planning, resource specialist review, bridge concept development, and fund raising to replace an existing 68 foot log stringer bridge.
Trail Construction and Upgrade	#12 Gummyworm Trail Extension and Reroute	1.2 to 1.5 miles of trail construction. 0.5 to 1 mile of trail vacating. Construction of one trail bridge.	District Staff / ODF Equipment Operators / Volunteers / South Fork Crew	Project work will consist of: <ul style="list-style-type: none"> <li>• Construction of 1.2 to 1.5 miles of trail.</li> <li>• 0.5 to 1 mile of trail vacating.</li> <li>• Construction of one trail bridge.</li> </ul> This MC/Quad trail project will disperse trail users, improve trail system diversity, improve public safety, reduce OHV use along forest roads and minimize the impact to trail network connections due to forest management operations.
Planning	Trestle Trail	1.5 to 2 miles	District Staff / Resource Specialists / Volunteers	Integration planning, trail location and design, and partnership development. This motorcycle trail project will disperse trail users, improve trail system diversity, improve public safety, reduce OHV use along forest roads and minimize the impact to trail network connections due to forest management operations.
Trail Construction / System Upgrade	#15 Island Trail Reroute	¾ to 1 mile	District Staff / OHV Equipment Operators / Volunteers.	Construction of ¾ to 1 mile of MC/Quad trail. The new segment will better disperse trail users and eliminate the need to use forest roads to travel from Island Trail to Chute Trail.
Trail Construction / System Upgrade	#45 Logjam Trail Reroute and Extension	1.5 to 2 miles	District Staff / OHV Equipment Operators	Construction of 1.5 to 2 miles of MC/Quad trail. The new segment will better disperse trail users and eliminate the need to use forest roads to travel from Log Jam Trail to Chute trail and Lyda Camp Area trails.

**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. FY2016 non-motorized trail projects are identified and described in the following table (Table 7)

**Table 7. Non-Motorized Trail Projects**

<b>Project Type</b>	<b>Project Name</b>	<b>Project Mileage</b>	<b>Work Resources</b>	<b>Project Description</b>
Planning – Trail Reroute	Highwater Trail Reroute	½ to ¾ miles	District Staff and Resource Specialists.	This project will reroute a section of the trail to improve trail sustainability, reduce trail maintenance costs, and address riparian area concerns associated with the existing trail. Planning and trail location and design work will take place in 2016.
Planning – Bridge Replacement	Gravelle Brothers Trail Bridge #12 Replacement	50 foot long bridge (Est.)	District Staff and Resource Specialists	This project will involve planning, fundraising, and design of a new bridge to replace the existing 46 foot long single log stringer bridge.
Trail Improvement	Gravelle Brothers Trail Culvert Installation	-	District Staff and South Fork Crew	This project will involve installation of three culverts at existing open water crossing locations. This project implements recommendations made during project review with resource specialists in FY2015.
Trail Improvement Bridge Construction	Gravelle Brothers Trail Bridge	25 foot long bridge	District Staff and South Fork Crew	This project involves construction of a new 25 foot long glu-lam stringer bridge across a fish bearing stream that is currently managed as an open water crossing. The project addresses safety, user access, and resource protection needs at the crossing. This project implements recommendations made during project review with resource specialists in spring 2014.

**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 issues, and to protect water quality. Trail maintenance activity includes the completion of trail condition assessments (101 miles motorized, 65 miles non-motorized), 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, repairing trail bridges, clearing downed trees, brushing, and sign replacement.

The District expects to complete condition assessments and trail clearing maintenance on all trails, trail bridges, trail infrastructures 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 50% of the network will receive basic maintenance attention in 2016.

**Salmonberry Trail Project**

Recreation Unit staff will provide project review and support as needed for the Salmonberry Trail project.

## **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 an estimated 6,000 to 8,000 hours of volunteer contribution in FY2016.

## **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 continue to support these activities. In FY 2016 the district expects to review, permit, and administer 8 to 10 motorized trail events and 2 non-motorized trail events. Motorized events for FY 2016 were scheduled at a meeting in December, 2014. There are no plans to pre-schedule FY 2016 non-motorized events.

New for 2016, the district will be permitting a Wagon Train Trek on forest roads that will be hosted by the Washington County 4H group as a Special Use Permit event in July 2015.

## **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

## **Land Exchange**

There are no active land exchange projects for this AOP.

## **Other Integrated Forest Management Operations**

### **District Annual Operation Firewood Cutting Plan**

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 1<sup>st</sup> 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 1<sup>st</sup> – June 30<sup>th</sup>). 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.

### **Miscellaneous 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 (and Information Systems)**

Below are the significant district-level planning projects currently scheduled for commencement, completion, or both in FY16.

### **Stand Level Inventory and Other Vegetation Inventories**

A request for proposal has been sent out to measure 32 stands (6,900 acres) within the Forest Grove District to update the Stand Level Inventory (SLI) in FY16. Stocking surveys will be conducted on approximately 2,500 acres of young stands to determine if desired live tree stocking levels have been met and to assess the need to manage competing vegetation or animal damage. These surveys will cost approximately \$37,500.

### **Wildlife Surveys**

#### Northern Spotted Owl Surveys

For FY16 sales, Forest Grove District will continue its northern spotted owl survey program, in order to effectively comply with federal and state Endangered Species Acts and to contribute to NW Forest Management Plan (FMP) goals. Survey requirements for each sale are determined in accordance with *ODF Northern Spotted Owl Operational Policies*, February 2013.

Three sales from the FY 15 sale plan, 15 of the 17 sales within the FY16 sale plan (including alternate sales), and all of the sales within the FY 17 sale plan are being surveyed for northern spotted owls, due to the presence of potentially suitable spotted owl habitat within and adjacent to the sale areas. The two sales within the FY 16 sale plan that are not being surveyed do not contain suitable habitat. Survey requirements for each of the sales are summarized in Table 8. In addition to the spotted owl survey program associated with planned timber sales, monitoring surveys of known spotted owl sites will continue in FY16, in order to determine site occupancy and the pair, nesting, and reproductive status of resident owls.

#### Marbled Murrelet Surveys

All of the Forest Grove District is located within the Systematic Survey Zone (*ODF Marbled Murrelet Operational Policies*, May 2013), thus operational surveys for marbled murrelets will not be conducted for sales in the FY16 sale plan.

**Table 8. Summary of Surveys for Threatened and Endangered Species**

<b>Operation</b>	<b>AOP Year</b>	<b>Species<sup>1</sup> (NSO/MM)</b>	<b>Survey Years<sup>2</sup></b>	<b>BA<sup>3</sup> Required</b>	<b>Special Considerations</b>
Motley Lou	FY 2015	NSO	2013, 2014, 2015	No	
Round House	FY 2015	NSO	2013, 2014, 2015	No	
Top Step	FY 2015	NSO	2013, 2014, 2015	No	
Catch and Release	FY 2016	NSO	N/A	No	No habitat, surveys not required
Cat's Meow	FY 2016	NSO	2013, 2014, 2015	No	
Clear Head	FY 2016	NSO	2014, 2015	No	
Dodgin' Scoggins	FY 2016	NSO	2014, 2015	No	
Gales 80	FY 2016	NSO	2014, 2015	No	
Gales Back Pocket	FY 2016	NSO	2013, 2014, 2015	No	
Nehalem Breaks	FY 2016	NSO	2014, 2015	No	
Piggy Back	FY 2016	NSO	2014, 2015	No	
Rusty Rope	FY 2016	NSO	2014, 2015	No	
Shinning C	FY 2016	NSO	2014, 2015	No	
Sunday Punch	FY 2016	NSO	2014, 2015	No	
Two Storeys	FY 2015	NSO	2013, 2014, 2015	No	
Whirling Derby	FY 2016	NSO	2014, 2015	No	
Blind Ambition ALT	FY 2016	NSO	2013, 2014, 2015	No	
My Mulligan ALT	FY 2016	NSO	N/A	No	No habitat, surveys not required
Nor Sam ALT	FY 2016	NSO	2014, 2015	No	
Box Car Willie	FY 2017	NSO	2015	No	
Camp View	FY 2017	NSO	2015	No	
Gales Storey	FY 2017	NSO	2015	No	
Kirk to Enterprise	FY 2017	NSO	2015	No	
Mega Lou Mania	FY 2017	NSO	2015	No	
Moving Music	FY 2017	NSO	2015	No	
Old Norse	FY 2017	NSO	2015	No	
Point Belding	FY 2017	NSO	2015	No	
Schetky Green	FY 2017	NSO	2015	No	
Woods Way	FY 2017	NSO	2015	No	
Roger That	FY 2017	NSO	2015	No	
Clatstastic	FY 2017	NSO	2015	No	
Salmonberry Bends	FY 2017	NSO	2015	No	
Elkberg	FY 2017	NSO	2015	No	
C-Line Central	FY 2017	NSO	2015	No	

<sup>1</sup> 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.

<sup>2</sup> Years that surveys have been completed or are planned.

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

## **Aquatic and Riparian Resources**

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 FY 16 AOP an initial screen by the district, ODFW fish biologist, the ODF Aquatic and Riparian specialist, and ODF road specialists has identified Carlson Creek and the North Fork Lousignont Creek as a potential candidates for restoration projects. These streams will be reviewed in the field by ODF's Aquatic and Riparian Specialist and ODFW fish biologists for potential projects during sale layout.

#### Planned Projects within the FY 16 AOP:

- 44.7 miles of road will be improved. This includes installing additional cross drain culverts to hydrologically disconnect the roads from streams as possible.
- 2-4 fish passage issues will be addressed on these roads.

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.

### **Research and Monitoring**

The Forest Grove District will assist in a variety of research and monitoring projects in FY16. 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.
- ◆ Swiss Needle Cast study areas.
- ◆ Riparian zone functions study areas.
- ◆ Green tree retention and seedling growth demonstration areas.

- ◆ OSU Intensive Forest Management study.

### **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 FY17 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.

Associated activities will include:

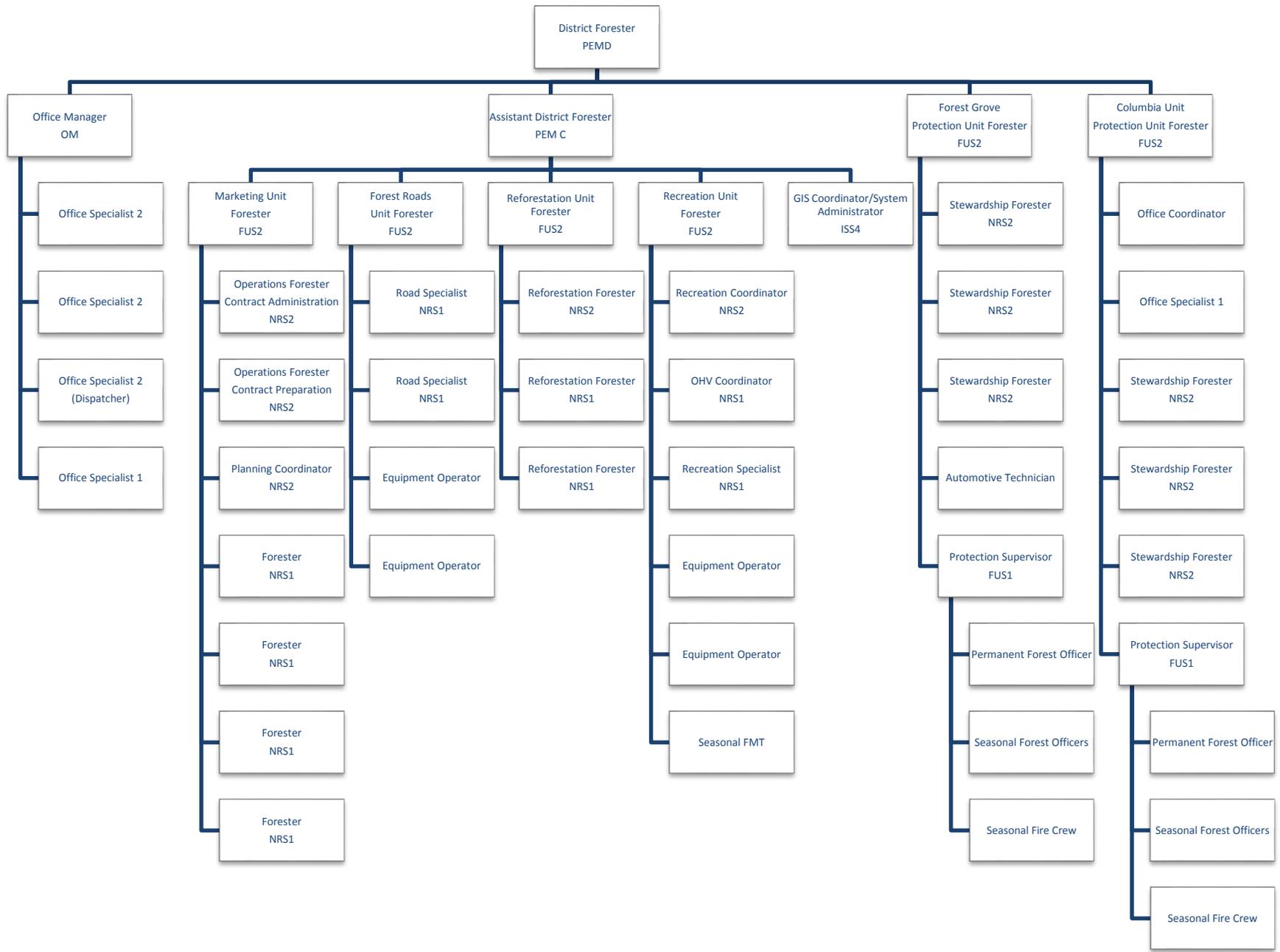
- ◆ Maintenance of the Tillamook State Forest web page and recreation information phone line.
- ◆ Development of information board messages and content.
- ◆ Updating and reprinting OHV and Non-motorized trail guides.
- ◆ Writing press releases about recreation program projects and recreation opportunities 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. Forest Land Management Classification Changes**

This appendix describes major changes to the Forest Land Management Classification and includes maps of the specific changes.

## **B. Summary Tables**

1. Harvest Operations – Financial Summary
2. Harvest Operations – Forest Resource Summary
3. Harvest Operation – Stand Structure Summary
4. Forest Road Management Summary
5. Reforestation and Young Stand Management Summary
6. Recreation Management Summary

## **C. Maps**

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

## **D. 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.

## **E. Public Involvement**

This appendix describes the results of the public involvement process of this AOP.

## **F. Pre-Operations Reports**

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

# Appendix A

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## **FLMCS Changes**

This is an explanation of proposed major changes to the Forest Land Management Classification System.

# APPENDIX A

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## **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. When changes in excess of 500 acres are proposed, a 45 day public comment period is held to allow review and suggestions. The public comment period is being held between March 23 and May 6, 2015.

The proposed change for the Forest Grove FLMCS is an additional 3,903 acres of Focused Stewardship Wildlife Habitat acres to accommodate a new Northern Spotted Owl site established following the 2014 survey season.

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**

<b>Classification</b>	<b>Board of Forestry</b>	<b>Common School</b>	<b>Administrative Sites</b>	<b>Total Acres*</b>
High Value Conservation	19,090	62	0	19,152
Special Use	17,201	17	16	17,234
Focused	<del>66,645</del> <b>70,548</b>	417	0	<del>67,062</del> <b>70,965</b>
General	<del>35,987</del> <b>35,917</b>	166	0	<del>36,153</del> <b>36,083</b>

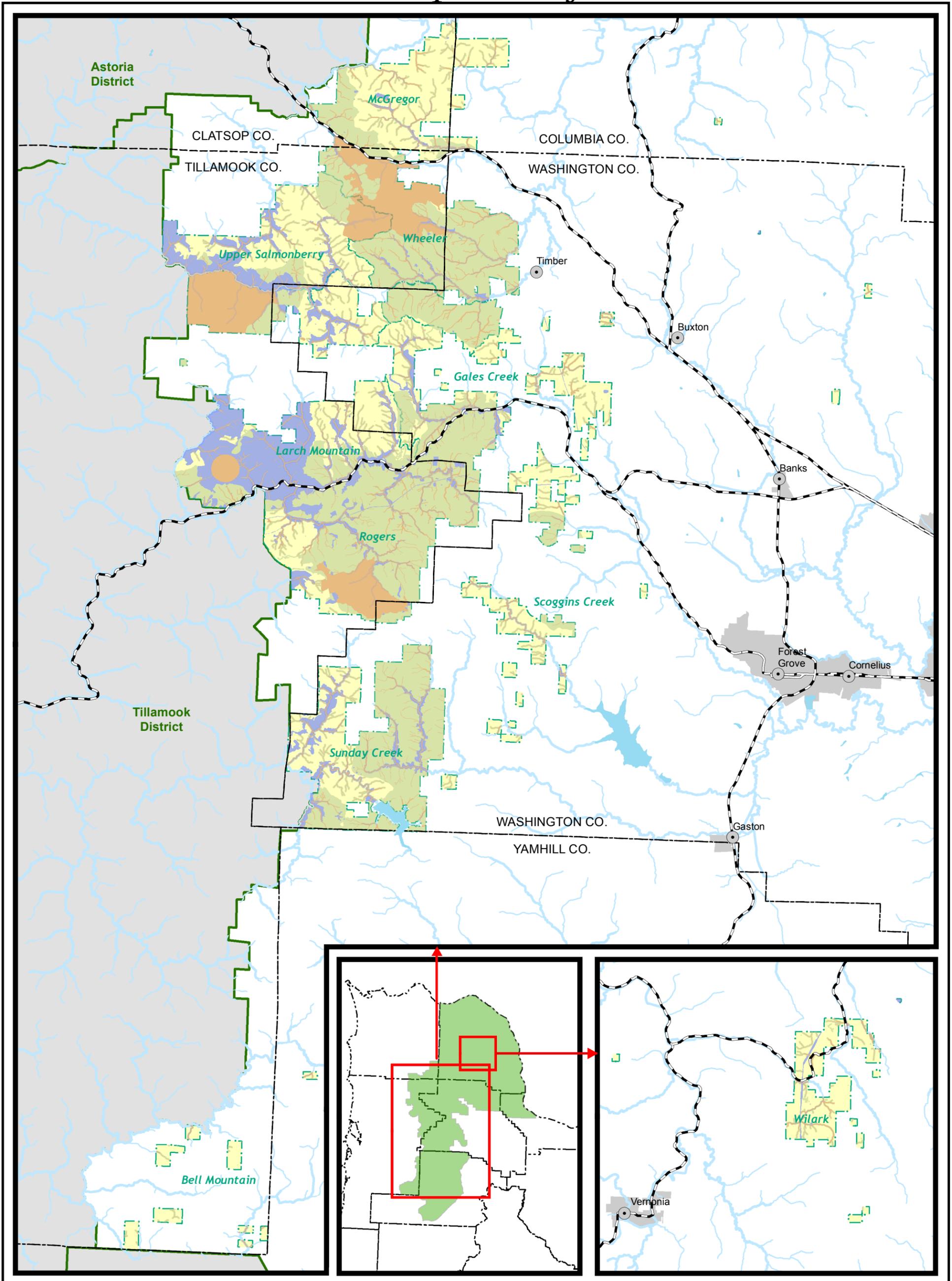
\*The sum of the total acres is greater than the total acres within the District. This is due to the overlap between the High Value Conservation, Special Use and Focused classifications on the forest.

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

	<b>Acres Focused</b>	<b>Acres Special Use</b>	<b>Acres High Value Conservation</b>
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	<del>35,651</del> <b>39,554</b>	0	9,639

Updated FLMCS maps are included for review.

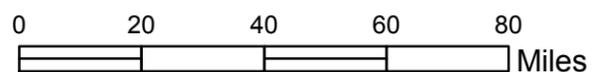
# Forest Grove District Stewardship Classifications



## Stewardship Classifications

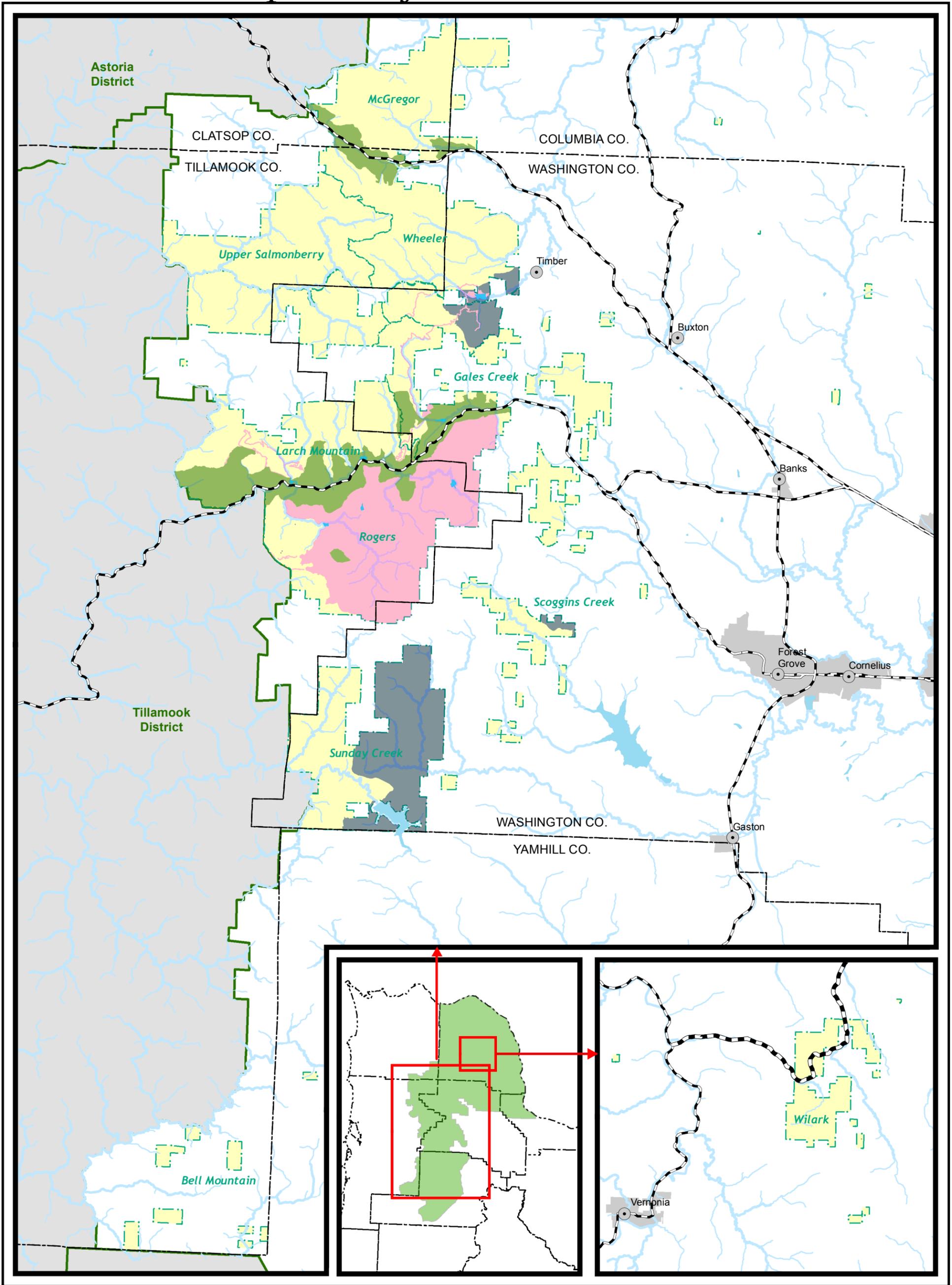
- High Value Conservation Area
- Special Use
- Focused

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



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# Forest Grove District Stewardship Classifications - Social Subclasses



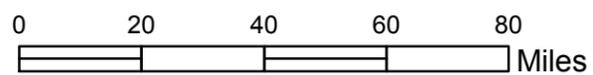
**Special Use**

- Recreation
- Visual

**Focused Stewardship**

- Domestic Water Use
- Recreation
- Visual

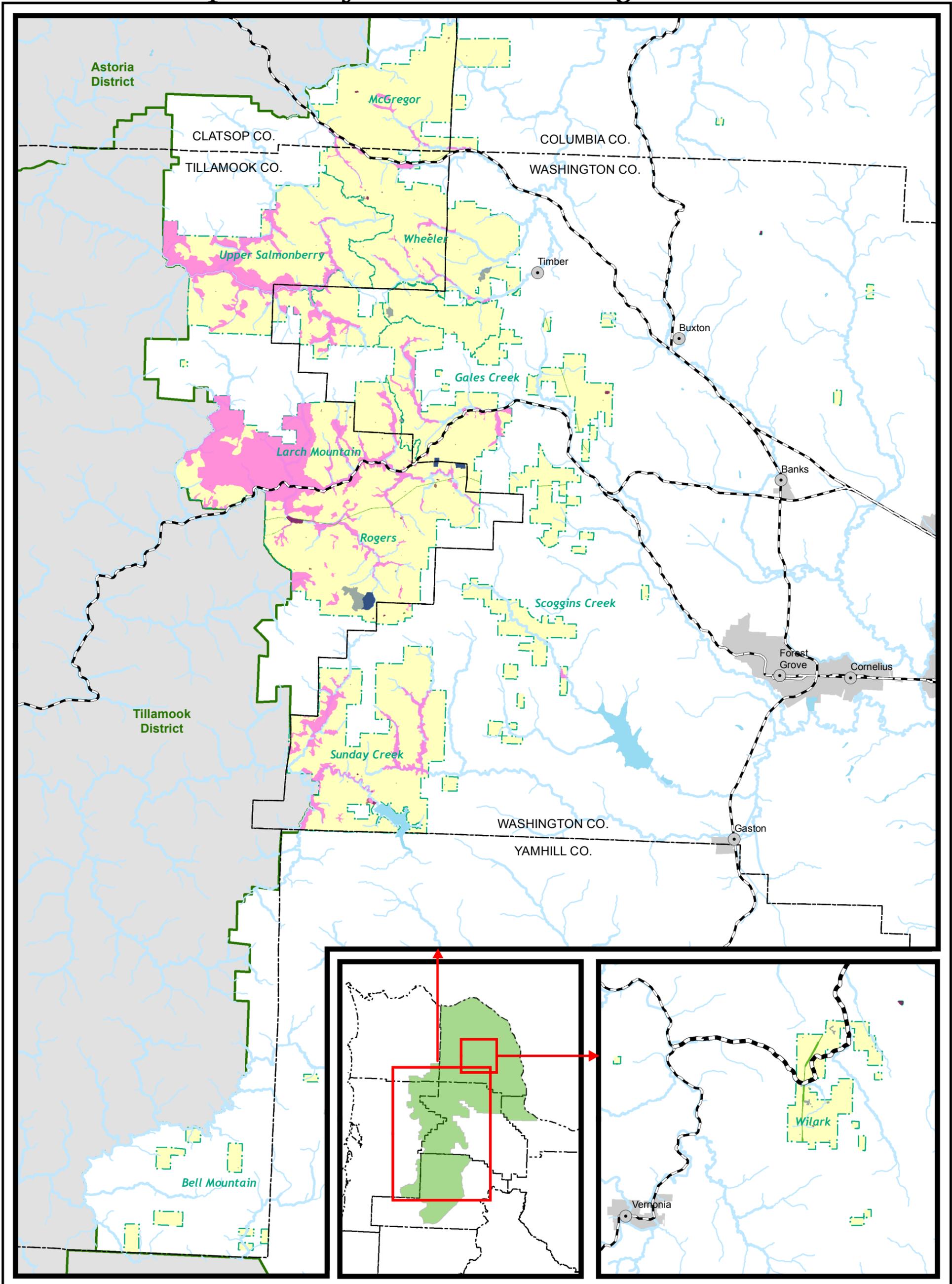
- Towns
- Highways
- Large Stream
- Medium Stream
- Management Basins
- Adjacent Districts



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# Forest Grove District

## Stewardship Classifications - Management Subclasses



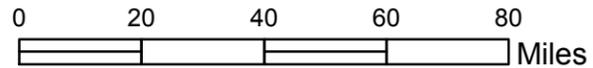
### Special Use

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

### Focused Stewardship

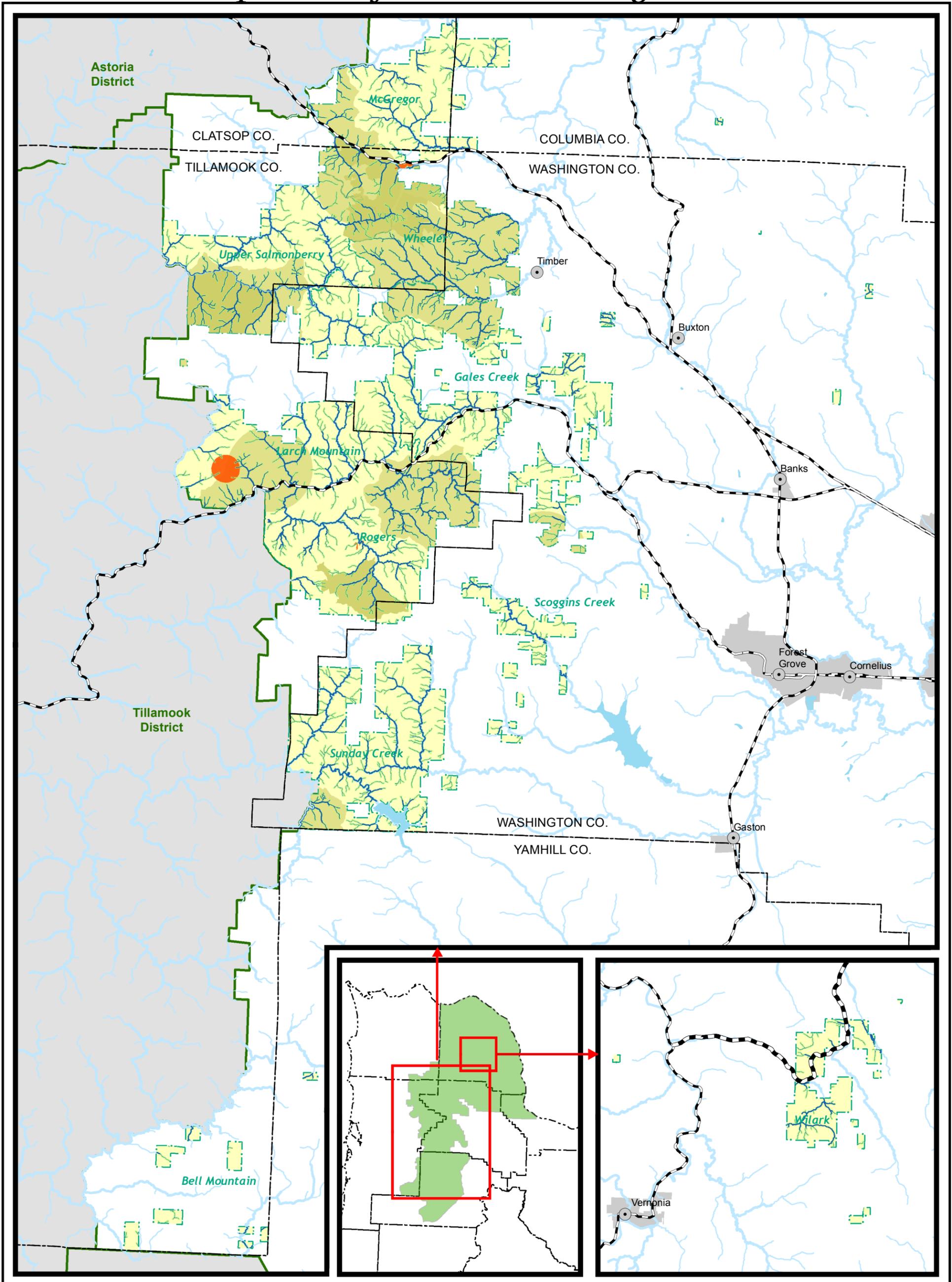
- Research/Monitoring

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



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# Forest Grove District Stewardship Classifications - Biological Subclasses



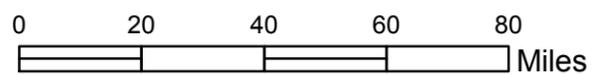
### High Value Conservation Areas

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

### Focused Stewardship

- Plants
- Wildlife Habitat
- Aquatic and Riparian Habitat

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



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# Appendix B

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

## TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: Forest Grove

Fiscal Year: 2016

Date: 02/03/2015

Primary Operation	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
	BOF	CSL			Partial Cut	Clear-cut	Conifer	Hardwoods	Total	Gross	Projects	Net
Catch and Release	100%		Washington	4	441		3.9		3.9	\$1,288,168	\$222,826	\$1,065,342
	100%		Tillamook		72		0.6		0.6	\$209,702	\$36,274	\$173,428
Cat's Meow	100%		Washington	2		80	4.0		4.0	\$1,800,000	\$0	\$1,800,000
Clear Head	100%		Columbia	3		149	5.4		5.4	\$2,157,668	\$80,427	\$2,077,241
	100%		Clatsop			32	1.1		1.1	\$441,932	\$16,473	\$425,459
Dodgin' Scoggins	100%		Washington	3		105	4.0		4.0	\$1,600,000	\$45,500	\$1,554,500
Gales Back Pocket	88%	12%	Washington	2		99	4.1		4.1	\$2,050,000	\$56,800	\$1,993,200
Gales 80	100%		Washington	2		70	3.4		3.4	\$1,445,000	\$69,100	\$1,375,900
Nehalem Breaks	100%		Tillamook	1		114	5.1		5.1	\$2,216,710	\$109,824	\$2,106,886
	100%		Washington			31	1.4		1.4	\$558,570	\$30,976	\$527,594
Piggy Back	100%		Tillamook	4	151		2.1		2.1	\$1,260,000	\$98,700	\$1,161,300
Rusty Rope	100%		Clatsop	2		157	6.6		6.6	\$2,769,480	\$429,900	\$2,339,580
Shining C	100%		Tillamook	4		111	4.6		4.6	\$1,837,600	\$176,600	\$1,661,000
Sunday Punch	100%		Washington	4	237		3.6		3.6	\$1,332,000	\$370,200	\$961,800
Two Storeys	100%		Washington	1		103	3.6		3.6	\$1,442,000	\$63,800	\$1,378,200
Whirling Derby	100%		Tillamook	3		104	4.6		4.6	\$1,978,000	\$84,300	\$1,893,700
					<b>901</b>	<b>1,155</b>	<b>58.1</b>		<b>58.1</b>	<b>\$24,386,830</b>	<b>\$1,891,700</b>	<b>\$22,495,130</b>

### Alternate Operations

Blind Ambition	100%		Washington			97	3.1		3.1	\$1,178,000	\$122,800	\$1,055,200
My Mulligan	100%		Washington			110	2.2		2.2	\$935,000	\$0	\$935,000
Nor Sam	100%		Tillamook		358		4.4		4.4	\$1,541,400	\$125,000	\$1,416,400

Table B-1 Financial Summary

## PRIMARY HARVEST OPERATIONS - FOREST RESOURCE SUMMARY

District:

Forest Grove

Fiscal Year 2016

Date: 12/15/2014

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 <sup>1</sup>	Invasive Species	LYR/OFS Structures <sup>2</sup>	Landscape Design LYR/OFS <sup>3</sup>	Install/Replace Culverts on Fish Bearing / Perennial Streams	Harvesting within 100' of Fish Bearing Stream	Domestic Water Source	Potential Stream Habitat Improvement <sup>4</sup>	Within Aquatic Anchor	Within Terrestrial Anchor	Operating within a NSO Provincial Circle	Within 1/4 mile of MMMA	T&E Fish Adjacent to Harvest Unit / Haul Route <sup>5</sup>	T&E Plants	Geotechnical Issues Needing Field Review	Recreation Sites	Cultural Resources	Scenic Resources	Other Resources or Issues
Catch and Release	1, 5					x			x	x								x		
	3									x				x						
	2, 4								x	x				x				x		
	6									x										
Cat's Meow				x																Bonneville transmission lines
Clear Head	1, 2, 3													x						
Dodgin Scoggins																				
Gales Back Pocket				x																
Gales 80				x				x												
Nehalem Breaks	1, 2, 3, 4, 5, 6									x				x				x		
Piggy Back				x	x					x	x									
Rusty Rope	1, 2			x										x						
Shining C	1, 2			x														x		
Sunday Punch																				
Two Storeys																		x		
Whirling Derby	1			x	x					x								x	x	

<sup>1</sup> 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

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

<sup>3</sup> A 'x' indicate that the operation contains areas that have been designated for the development of complex forest stands

<sup>4</sup> The final decision on these projects will occur during sale preparation and in consultation with ODFW.

<sup>5</sup> 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

Table B-2 Forest Resource Summary

## 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 <sup>1</sup>	Invasive Species	LYR/OFS Structures <sup>2</sup>	Landscape Design LYR/OFS <sup>3</sup>	Install/Replace Culverts on Fish Bearing / Perennial Streams	Harvesting within 100' of Fish Bearing Stream	Domestic Water Source	Potential Stream Habitat Improvement <sup>4</sup>	Within Aquatic Anchor	Within Terrestrial Anchor	Operating within a NSO Provincial Circle	Within 1/4 mile of MMMA	T&E Fish Adjacent to Harvest Unit / Haul Route <sup>5</sup>	T&E Plants	Geotechnical Issues Needing Field Review	Recreation Sites	Cultural Resources	Scenic Resources	Other Resources or Issues	
Blind Ambition																x					
My Mulligan				x						x				x							
Nor Sam	1			x	x									x							
	2			x	x					x				x				x			

<sup>1</sup> 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

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

<sup>3</sup> A 'x' indicate that the operation contains areas that have been designated for the development of complex forest stands

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

<sup>5</sup> 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

## TIMBER HARVEST OPERATIONS - FOREST STRUCTURE SUMMARY

District: Forest Grove

Fiscal Year 2016

Date: 01/28/2014

Current Structure	
	Total
REG	
CSC	220
UDS	1,249
LYR	587
OFS	
<b>Total</b>	<b>2,056</b>

Post Harvest Structure				
REG	CSC	UDS	LYR	OFS
123	97			
599		650		
436			151	
<b>1,158</b>	<b>97</b>	<b>650</b>	<b>151</b>	<b>0</b>

Desired Future Condition		
GEN	LYR	OFS
220		
1,101		148
436	21	130
<b>1,757</b>	<b>21</b>	<b>278</b>

Table B-3 Harvest Structure

## FOREST ROADS SUMMARY

District: Forest Grove

Fiscal Year: 2016

Date: 12/22/2014

Operation	Construction		Improvement		Other Projects	Total Project Costs	Gross Value of Operation	Total Cost as a percent of Gross Value	Comments
	Miles	Cost	Miles	Cost					
Catch and Release	0.42	\$29,400	8.00	\$160,000	\$69,700	\$259,100	\$1,497,870	17.3%	
Cat's Meow	0.00	\$0	0.00	\$0	\$0	\$0	\$1,800,000	0.0%	
Clear Head	0.32	\$19,400	3.45	\$77,500	\$0	\$96,900	\$2,599,600	3.7%	
Dodgin' Scoggins	0.76	\$45,500	0.00	\$0	\$0	\$45,500	\$1,600,000	2.8%	
Gales Back Pocket	0.68	\$41,100	0.78	\$15,700	\$0	\$56,800	\$2,050,000	2.8%	
Gales 80	0.44	\$32,700	1.21	\$36,400	\$0	\$69,100	\$1,445,000	4.8%	
Nehalem Breaks	1.04	\$73,000	2.71	\$67,800	\$0	\$140,800	\$2,775,280	5.1%	
Piggy Back	0.17	\$12,000	3.28	\$82,000	\$4,700	\$98,700	\$1,260,000	7.8%	
Rusty Rope	0.98	\$78,800	11.70	\$351,100	\$0	\$429,900	\$2,769,480	15.5%	
Shining C	0.81	\$65,200	0.45	\$11,400	\$100,000	\$176,600	\$1,837,600	9.6%	
Sunday Punch	1.11	\$88,700	7.30	\$255,500	\$26,000	\$370,200	\$1,332,000	27.8%	
Two Storeys	0.87	\$52,300	0.65	\$6,500	\$5,000	\$63,800	\$1,442,000	4.4%	
Whirling Derby	0.54	\$32,300	5.20	\$52,000	\$0	\$84,300	\$1,978,000	4.3%	
<b>Total</b>	<b>8.14</b>	<b>\$570,400</b>	<b>44.73</b>	<b>\$1,115,900</b>	<b>\$205,400</b>	<b>\$1,891,700</b>	<b>\$24,386,830</b>	<b>7.8%</b>	

### Alternate Operations

Blind Ambition	0.0	\$0	4.91	\$122,800	\$0	\$122,800	\$1,178,000	10.4%	
My Mulligan	0.0	\$0	0	\$0	\$0	\$0	\$935,000	0.0%	
Nor Sam	0.81	\$48,900	4.54	\$76,100	\$0	\$125,000	\$1,541,400	8.1%	

### Road Projects Not Funded by Harvest Operations

Operation	Construction		Improvement		Other Projects	Total Project Costs	Funding	Comments
	Miles	Cost	Miles	Cost				

## REFORESTATION AND YOUNG STAND MANAGEMENT SUMMARY

District: Forest Grove

Fiscal Year: 2016

Date: 12/03/2014

ODF Funded Activities Management Activity	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	1,100	\$285	\$313,500				1,100	\$313,500.00
Interplanting	150	\$195	\$29,250				150	\$29,250.00
Underplanting	0		\$0				0	\$0.00
Tree Protection-Barriers	130	\$150	\$19,500				130	\$19,500.00
Tree Protection-Direct Control	600	\$65	\$39,000				600	\$39,000.00
Site Prep-Chemical- Aerial	650	\$55	\$35,750				650	\$35,750.00
Site Prep-Chemical- Hand	100	\$95	\$9,500				100	\$9,500.00
Site Prep -Slash Burning Piles	1,100	\$25	\$27,500				1,100	\$27,500.00
Site Prep -Slash Burning Brdcst	40	\$250	\$10,000				40	\$10,000.00
Site Prep -Mechanical	275	\$160	\$44,000				275	\$44,000.00
Fertilization	0		\$0				0	\$0.00
Noxious weeds			\$0				0	\$0.00
Release-Chemical- Aerial	0		\$0				0	\$0.00
Release,-Chemical-Hand	100	\$95	\$9,500				100	\$9,500.00
Release-Mechanical-Hand	100	\$100	\$10,000				100	\$10,000.00
Precommercial Thinning	0		\$0				0	\$0.00
Pruning - white pine blister rust	50	\$50	\$2,500				50	\$2,500.00
Other -- stocking surveys	2,500	\$15	\$37,500				2,500	\$37,500.00
<b>TOTALS</b>	<b>6,895</b>	<b>--</b>	<b>\$587,500</b>	<b>0</b>	<b>--</b>	<b>\$0</b>	<b>6,895</b>	<b>\$587,500</b>

\*Planting costs include all costs including seedlings

Grant Funded Activities Management Activity	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	
			\$0			\$0	0	\$0	

Table B-5 Reforestation and Young Stand Management

**RECREATION MANAGEMENT SUMMARY**

District: Forest Grove

Fiscal Year: 2016

Date Filled Out: 12/22/2014

Operation	Construction Projects	Construction Cost (Funding)		Improvement Projects	Improvement Cost (Funding)		Operations and Maintenance	Operations/Maint. (Funding)		Total Costs	Comments
		ODF	Other		ODF	Other		ODF	Other		
<b>Facilities</b>											
<b>Campgrounds</b>											
Stagecoach HC				1	\$ 4,000.00		X	\$ 1,000.00		\$ 5,000.00	Operations = sewage only Improvement = upgrade of 3-panel information board structure (4000)
Gales Creek CG				2	\$18,725.00		X	\$ 7,500.00		\$ 26,225.00	Operations = garbage (2500) & sewage (5500) Improvement = Host shed roof replacement (3000) Picnic tabel replacement (15725)
Reehers Camp				1	\$ 8,000.00		X	\$ 6,000.00		\$ 14,000.00	Operations = garbage (1800) & sewage (4200) Improvement = upgrade of two 3-panel information board structures (8000)
Lyda Camp							X		\$ 2,400.00	\$ 2,400.00	Operations = Portable Toilet - ATV Transfer fund
Browns Camp				1	\$ 3,275.00		X		\$ 15,000.00	\$ 18,275.00	Operations = garbage and sewage Improvement = Picnic table replacement (3275)
Elk Creek				2	\$ 6,500.00		X	\$ 3,200.00		\$ 9,700.00	Operations = sewage only Improvement = Expand Trailhead Parking Area - materials cost (2500) and 3-panel information board upgrade (4000)
Other Operations Expenses							X	\$ 51,000.00		\$ 51,000.00	Well testing, county well reviews, well maintenance, fee envelopes, host water, host supplies, dust abatement, picnic table replacement (\$19000), CXT toilet painting, hazard tree removal, facility operations supplies, signs, SF dumpster, and operations and maintenance of day use facilities.
<b>Designated Dispersed Campsites</b>											
										\$ -	

Operation	Construction Projects	Construction Cost (Funding)		Improvement Projects	Improvement Cost (Funding)		Operations and Maintenance	Operations/Maint. (Funding)		Total Costs	Comments
		ODF	Other		ODF	Other		ODF	Other		
<b>Day Use Areas</b>											
										\$ -	
<b>Trailheads</b>											
Rogers Camp							X	\$ 1,700.00	\$ 1,700.00	\$ 3,400.00	Operations = sewage only 1/2 charged to ATV Transfer Fund
Gales Creek Trailhead										\$ -	
Deyoe Creek				1	\$ 200.00					\$ 200.00	Site sign fabrication and installation
University Falls										\$ -	
Summit Trailhead										\$ -	
Four County Point TH										\$ -	
Storey Burn Trailhead										\$ -	
Kings Mountain TH							X	\$ 3,000.00		\$ 3,000.00	Operations = sewage only
Bell Camp Trailhead										\$ -	
<b>Interpretive Sites</b>											
Gales Creek Overlook										\$ -	
Sunset Rest Area					\$ 1,500.00					\$ 1,500.00	Materials & SF Install
										\$ -	
<b>Trails</b>											
<b>Non-Motorized</b>											
Nels Rogers Trail Reroute				X	\$ 100.00					\$ 100.00	District staff and South Fork Crews. Cost for sign materials
Gravelle Brothers Trail Bridge #12 Construction				X	\$4,200.00					\$ 4,200.00	25 foot trailbridge. District staff and South Fork Crews. Cost for bridge materials.
Gravelle Brothers Trail Bridge #13 Replacement				X	\$17,500.00					\$ 17,500.00	Planning, fundraising, conceptual design, design, and oermit work to be complete. Cost shown to design a bridge if longer than 50 feet.
Gravelle Brothers Trail Culvert Installation				X	\$ 1,600.00					\$ 1,600.00	
Maintenance					\$ 800.00					\$ 800.00	Cost for tools, sign material, bridge maintenance material.

Table B-6 Recreation Management Summary



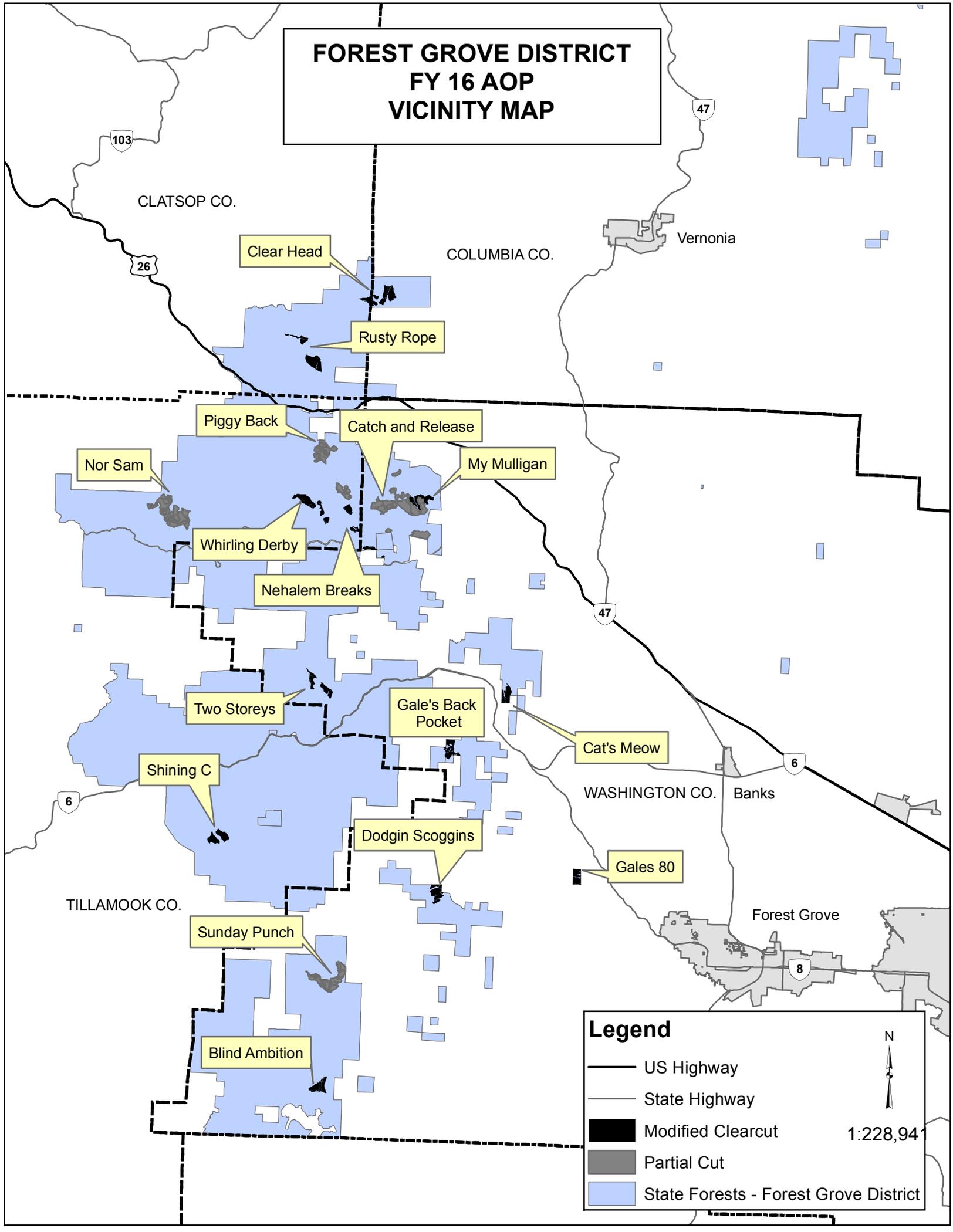
# Appendix C

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## **Maps**

- Vicinity Map of Pre-Operation locations
- Vicinity Map of Recreation project locations
- Vicinity Map of Recreation Facilities

# FOREST GROVE DISTRICT FY 16 AOP VICINITY MAP

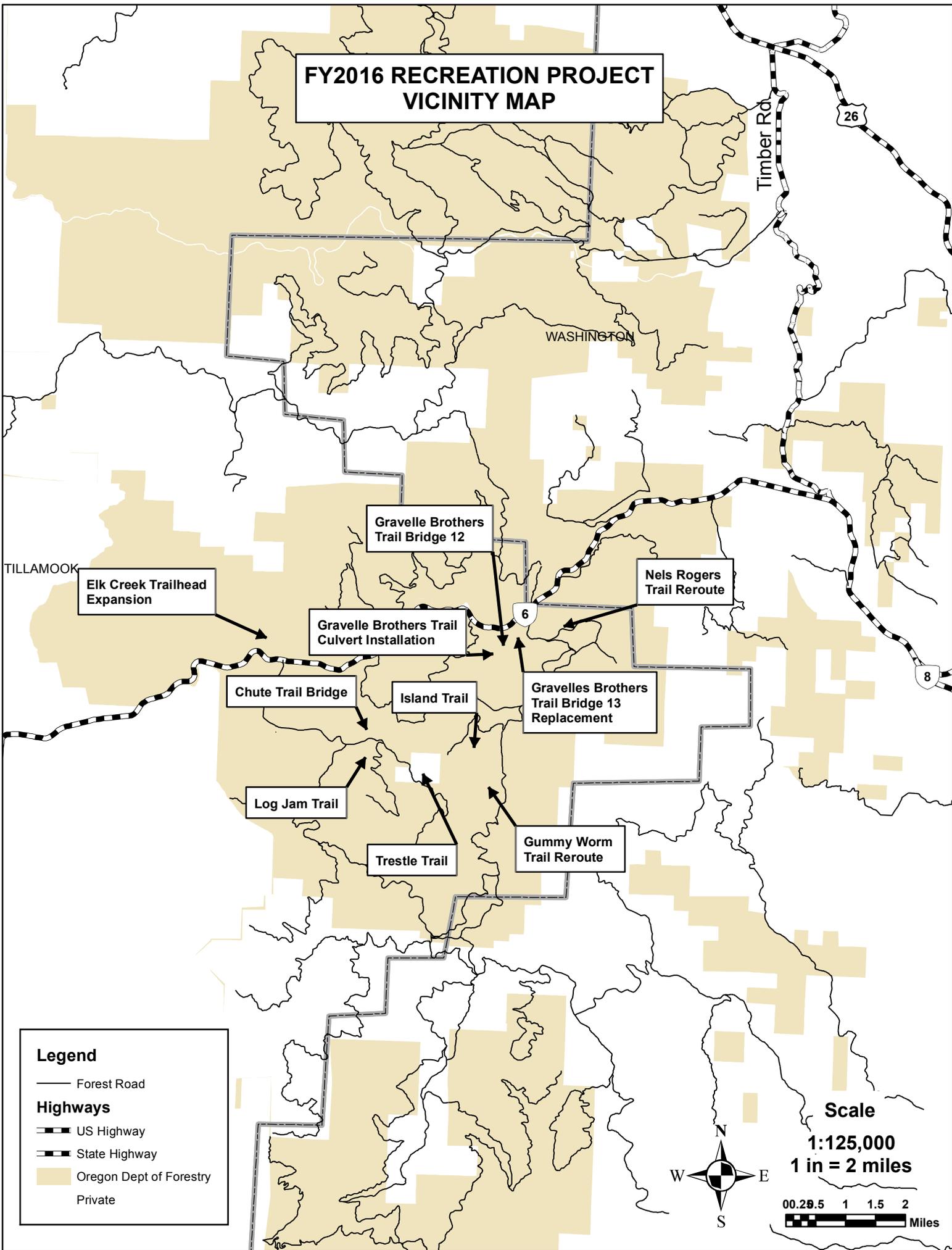


**Legend**

- US Highway
- State Highway
- Modified Clearcut
- Partial Cut
- State Forests - Forest Grove District

N  
1:228,941

# FY2016 RECREATION PROJECT VICINITY MAP



Elk Creek Trailhead Expansion

Gravelle Brothers Trail Bridge 12

Nels Rogers Trail Reroute

Gravelle Brothers Trail Culvert Installation

Chute Trail Bridge

Island Trail

Gravelles Brothers Trail Bridge 13 Replacement

Log Jam Trail

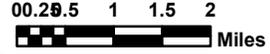
Trestle Trail

Gummy Worm Trail Reroute

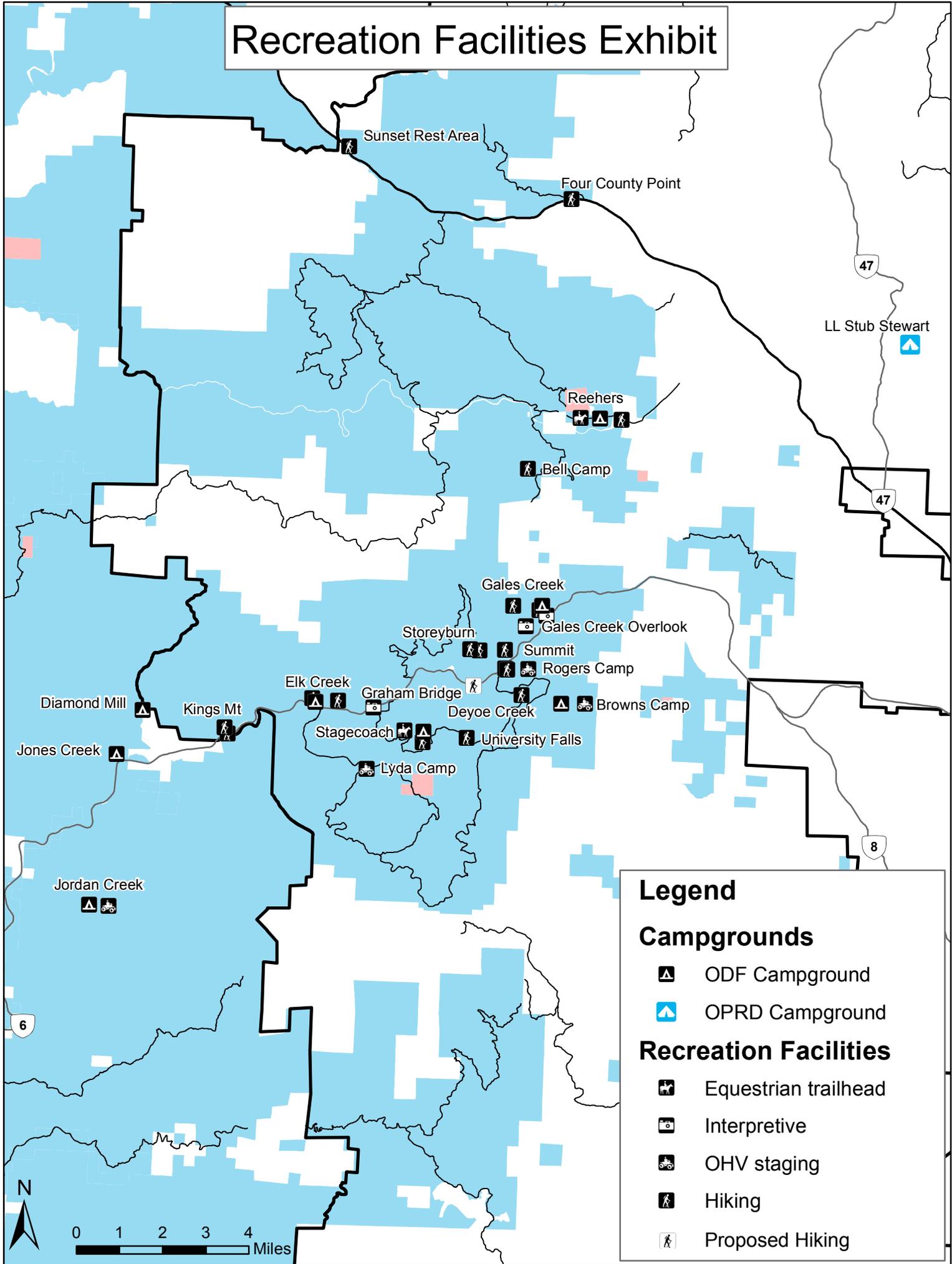
## Legend

- Forest Road
- Highways**
- ▬ US Highway
- ▬ State Highway
- Oregon Dept of Forestry
- Private

**Scale**  
 1:125,000  
 1 in = 2 miles



# Recreation Facilities Exhibit



LL Stub Stewart

## Legend

### Campgrounds

- ODF Campground
- OPRD Campground

### Recreation Facilities

- Equestrian trailhead
- Interpretive
- OHV staging
- Hiking
- Proposed Hiking

# Appendix D

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## **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.

# Appendix D

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## **Consultations with Other State Agencies**

This appendix summarizes the results of consultations with the Oregon Department Of Fish and Wildlife and the Oregon Department of Transportation.

- No written comments from ODFW have been received, however, verbal comments from field and office reviews were considered while preparing this AOP.
- 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 the historic activity) will be reviewed on the ground prior to sale or project layout to determine if any cultural artifacts are present:

- Potential Adjacent Trail: Log Jam Trail Extension, Island Trail, Trestle Trail Bridge, Shining C sale, Two Storeys sale
- Potential House or Cabin: Elk Creek Trailhead Parking Lot, Piggy Back sale, Nehalem Breaks sale
- Potential Old Military Wagon Road: Whirling Derby sale, Nehalem Breaks sale.

# Appendix E

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## **Public Involvement**

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

# Appendix F

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## **Pre-Operations Reports**

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