

TABLE OF CONTENTS

INTRODUCTION	3
INTEGRATED FOREST MANAGEMENT OPERATIONS	5
Timber Harvest Operations.....	5
Overview of Timber Harvest Operations	5
Summary of Operations by Basin.....	8
Forest Roads Management.....	13
Overview	13
Road Management Considerations.....	14
Road Construction	17
Road Improvement	18
Road Access Management	19
Road Maintenance.....	19
Land Surveying	20
Non-Commercial Forest Management Operations	21
Rehabilitation.....	21
Site Preparation.....	21
Tree Planting	23
Vegetation Management.....	24
Tree Protection.....	25
Precommercial Thinning (Density Management).....	26
Fertilization	26
Pruning	26
Recreation Management	28
Overview of Recreation Management	28
Facilities Development	
(Campgrounds, View Points, Trail Heads, Staging Areas, etc.)	28
Developed Facility Upgrades.....	29
Facilities Operations	
(Campgrounds, View Points, Trail Heads, Staging Areas, etc.)	30
Undeveloped Facility Operations and Dispersed Site Management	30
Trail Development	31
Trail Assessments and Upgrades.....	32
Trail Maintenance.....	33
Volunteer Program.....	34
Event Management.....	34
Land Management Classification.....	35
Land Exchange.....	35

Other Integrated Forest Management Operations 35

PLANNING (AND INFORMATION SERVICES) 37

Stand Level Inventory and Other Vegetation Inventories 37

Fish and Wildlife Surveys..... 37

Watershed Assessments 40

Research and Monitoring..... 40

Other Planning Operations 41

PUBLIC INFORMATION AND EDUCATION 42

ADMINISTRATION..... 43

APPENDICES 44

A. Summary Tables 44

B. Pre-Operations Reports 44

C. Recreation Exhibits 44

D. Public Comments 44

FOREST GROVE DISTRICT

2007 ANNUAL OPERATIONS PLAN

INTRODUCTION

The scope of this annual operations plan (AOP) covers State forest land within the Forest Grove District for the time period of July 1, 2006 to June 30, 2007 (FY07). This document summarizes the activities and projects in FY07 that are designed to achieve the goals, strategies and objectives of the NW Oregon State Forests Management Plan, the Tillamook State Forest Recreation Action Plan, the Forest Grove District Implementation Plan, and portions of the (DRAFT) Western Oregon Habitat Conservation Plan.

The summary document of the AOP is divided into five major categories: Integrated Forest Management, Planning and Information Systems, Public Information and Education, Administration, and Appendices. Appendix A contains summary tables for commercial forest management (financial summary, stand structure summary, and roads), young stand management, recreation, and salmon anchor habitats. Appendix B is the largest component of the AOP and contains pre-operations reports and maps for individual harvest operations. A summary concerning the results of the public involvement process will be added to the final plan.

The management activities planned for FY07 are based on the range of objectives established in the Implementation Plan (Table 1 below). The objectives and specific plans for timber harvesting and the associated roadwork provide an accurate picture of what will be designed and prepared for contract in FY07. Due to the time lag associated with contract duration, most of the actual on-the-ground logging and road operations will not happen until a one to three year time period beyond the end of the fiscal year.

In contrast to the timber harvest and road plans, the reforestation, young stand management, recreation management, road maintenance, planning and information activities detailed in this plan will actually occur within the FY07 time period. The planned amount and location of these management activities are based on the latest site-specific assessments and estimates of operational, growth, and seasonal variables. These management activity levels will be adjusted and modified to account for any significant changes to the variables.

Harvest Levels: In accordance with the guidance on the 2007 harvest levels¹, the district has included 53.3 MMBF of timber harvest in this Annual Operations Plan (Table A-1). This harvest level is consistent with the district's intensive review² of the outputs from the Department's recently completed Harvest and Habitat Model Project. The district is transitioning to the mix of clearcut and partial cut acres identified in its review of the model outputs. However, the acre mix identified during the model review could not be fully implemented in this plan because of operational considerations, such as the completion of surveys for threatened and endangered species. In order to implement the transition to the acres identified in the model review, a minor modification of the district implementation plan will be completed prior to the approval of this Annual Operations Plan.

In order to retain flexibility to respond to policy changes by the Board of Forestry or State Forester that may influence management direction on state forestlands and directly or indirectly influence harvest levels during the FY07 fiscal year, the district has included additional Alternate Operations in this operations plan.

Table 1. Annual Operations Plan objectives compared to annual objectives identified in the Forest Grove District Implementation Plan (Table A-1). All values are net acres.

Silvicultural Activity	IP Annual Objective		2007 AOP Objective
	Low	High	
Conifer Partial Cut	2,365	3,547	2,374
Conifer Regeneration Cut	338	1,100	539
Hardwood Partial Cut	0	0	0
Hardwood Clearcut	0	0	0
Rehabilitation	0	0	0
Reforestation (Initial Planting)	250	650	633
Precommercial Thinning	100	300	300
Fertilization	3,000	6,000	4,000
Pruning	100	400	120

¹ Establishing harvest levels in FY07 on State Forests covered by the NW and SW Oregon State Forest Management Plan

² Model Solution Review Report of the 'Forest Management Plan with Habitat Conservation Plan' Alternative

INTEGRATED FOREST MANAGEMENT OPERATIONS

Timber Harvest Operations

Overview of Timber Harvest Operations

The following planned commercial forest management activities are within the guidelines and objectives outlined in the Forest Grove District's approved Implementation Plan. Tabular summaries and detailed pre-operations reports for each planned timber sale are attached.

As described in the approved Implementation Plan, the FY07 AOP emphasizes partial cuts due to the high percentage of Closed Single Canopy (CSC) and Understory (UDS) stand structures existing within the Forest Grove District. CSC and many UDS stand structures are characterized by the closed crowns of the overstory trees, which limits the amount of sunlight reaching the forest floor. This low light level precludes the introduction of both brush and shade tolerant conifer species in the understory, thus leaving the forest floor sparsely vegetated. Of all the structure types, CSC is the least used by wildlife species, especially those that require more complex habitats. Stands of CSC structure, (that are not "over-dense"³), and even most Understory (UDS) stands respond well to partial cutting. While all these partial cut prescriptions will increase tree growth in the overstory, response in the understory will vary depending on several factors. Some of these factors include, but are not limited to: density of residual overstory, available seed source of shade tolerant tree species, existing ground cover, and site preparation. With the right combination of these factors initiation of a shade tolerant conifer understory is very likely. In other cases shade tolerant trees may have to be planted if a layered stand structure is desired. Then again, some partial cuts may be followed by clearcut at the next active management entry. In these cases establishment of an understory stand is not a priority.

Overall, this sale plan will reduce the district percentage of CSC and UDS, moving most of it towards the eventual development of more complex stand structures. Layered stands (LYR) are in a more developed stage than UDS. A stand reaches Older Forest Structure (OFS) when a Layered stand attains several structural characteristics that are normally associated with older forest conditions. Throughout this plan the term General management (GEN) will be used to describe the desired future condition (DFC) of stands

³ Over-dense stands can be characterized by trees growing so close together that virtually all sunlight is blocked from direct contact with the forest floor. These trees will have very high height to diameter ratios, (tall and skinny), and have very low live crown to bole ratios. These stands are usually growing at a very slow rate and may not respond well, (or at all), to partial cut prescriptions.

that are not planned for OFS or LYR in the Forest Grove District's landscape design for complex structures.

The process of producing an array of forest stand structures across the landscape is a gradual one. A variety of sound silvicultural practices will be used to actively move the forest towards the desired range of stand structures outlined in the Implementation Plan.

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. 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 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.

The "non-thinnable" areas that are often delineated within partial cut sales are made up of either well-stocked red alder, sparsely stocked conifer, a mix of both conifer and alder, or non-merchantable conifer trees. These non-thinnable areas usually range in size from 1 acre to 20 acres. Leaving these areas unharvested helps contribute to the biological diversity across the landscape.

The stands targeted for regeneration harvest in this sale plan fit into one or more of the following categories: over-stocked dense stands, under-stocked sparse stands, diseased stands, stands that are surplus to the complex structure targets in the desired future condition landscape design, highly marketable stands in areas where regeneration harvest would result in minimal resource impacts, and stands in areas that would provide an opening in the landscape to temporarily serve as big game foraging habitat. The 539 acres of regeneration harvest planned for FY07 represents 0.5 percent of the district. During the year 2006 approximately 440 acres will grow out of the Regeneration (REG) stand type, resulting in a 0.09 percent increase in the district percentage of the REG stand type. Of the 539 acres planned for regeneration harvest 100 percent will be designed as modified clearcuts. Of the 2,374 acres of partial cut, approximately 95 percent are planned for moderate partial cut and 5 percent are planned for heavy partial cut. Complete harvest type definitions can be found at the following site:

http://www.egov.oregon.gov/ODF/STATE_FORESTS/planning.shtml

Structural habitat components such as snags and down woody debris (DWD) may be considered for all harvest prescriptions; however, the emphasis will be placed on regeneration harvest and partial cuts with larger diameter trees. In the case of regeneration harvests, it is essential to incorporate structural habitat components into the management prescription to ensure they are retained. Therefore, in regeneration harvest units, two snags per acre will be created and 5-7 green trees/acre will be left standing. Green tree retention may be scattered throughout the unit or left in clumps.

In partial cuts with a larger average DBH, snags will be created at a frequency of 1 per every 2 acres to 1 per acre, depending on the amount of previous snag creation and natural mortality in the surrounding stands. Recent on-site observations have revealed that additional snag recruitment frequently occurs adjacent to topped trees in partial cuts due to bark beetle activity. Obviously, numerous green trees are retained on each acre of a partial cut allowing for additional snag and DWD recruitment through natural processes over time.

Another opportunity for natural recruitment of snags and DWD is created by laminated root rot disease (*Phellinus wereii*). 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, and the estimates of post harvest expectations are based on ocular estimates, past experience, and Stand Level Inventory (SLI). In this AOP we are targeting five sales for increased DWD production: Johnny Hairpin, Park Place, Roger's Break, Sgt. Rock, and Upper Elliot. This strategy is discussed in more detail in the Basin Summary section of this document.

Stand Level Inventory has been completed for all of the FY07 sales. Existing Class 1 and 2 DWD levels in the FY07 planned sales averages 215 cubic feet per acre for the regeneration harvest units and 175 cubic feet per acre for the partial cut units. 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 numbers suggest that DWD increases by 400 – 450 cubic feet per acre shortly after harvest. This can be attributed to natural recruitment, residual logging slash, and tree topping.

Table 2. Stand Structure Development – This table summarizes how the timber harvest operations in this AOP will contribute to achieving the District's desired future condition. All values are net acres.

Stand Structure	REG	CSC	UDS	LYR	OFS	GEN ¹
Current	0	162	2,763	0	0	0
Post Harvest ²	539	0	2,385	0	0	0
Desired Future	0	0	0	498	834	1,580

¹ General (GEN) is not a stand structure, but identifies those stands that are not targeted for Layered or Older Forest Structure in the district landscape design. These stands may develop into any of the five stand structures.

² The Post Harvest stand structure is an estimate of how the stands will develop in five to ten years after the operations are completed. Post-harvest condition will exist for approximately 5 to 15 years. Desired Future Condition stand structures will be attained approximately 40 to 80 years in the future.

The FY07 AOP is estimated to generate gross revenues of approximately \$20,400,000 and net revenues of \$18,672,000. Refer to the attached Financial Summary Table (Appendix A, Table A-1) and/or pre-operation reports for more detail.

Summary of Operations by Basin

In the following section, the commercial forest management operations planned for FY07 will be summarized in the context of the eleven management basins on the Forest Grove District. Several resource specialists reviewed the FY07 AOP and provided input. The summary for each sale reflects significant concerns identified by the management unit of the Forest Grove District and/or the resource specialists. 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 under "Special Concerns". Road concerns and standards are discussed in the Roads and Engineering section.

Table 3. Summary of Timber Harvest Operations by Basin. All values are net acres.

Basin	Total Acres	2007 AOP		Cumulative Operations ¹ (FY 02, 03, 04, 05, 06, 07)	
		Partial Cut	Regen	Partial Cut	Regen
Bell Mountain	1,728	0	0	133	0
Isolated Tracts	554	0	0	0	0
Gales Creek	10,166	391	0	1,333	454
Larch Mountain	13,157	325	0	1,848	157
McGregor	10,618	118	135	2,761	726
Rogers	20,844	874	125	3,717	499
Scoggins Creek	3,018	0	0	340	43
Sunday Creek	15,287	432	104	3,411	146
Upper Salmonberry	18,879	0	98	3,207	357
Wheeler	16,142	234	77	2,259	417
Wilark	4,596	0	0	486	170
	114,989	2,374	539	19,495	2,969

¹The Cumulative Operations include all Timber Harvest Operations, prepared and proposed, under the current implementation plan period (July 1, 2001 through June 30, 2011). Operations or units that were proposed, but have been subsequently dropped, are not included in the total.

Acreage for each sale is net acres. The gross acres were first derived using GIS. Roads, stream buffers, non-thinnable areas, and green tree retention areas were then subtracted from the gross acres to calculate net acres.

Bell Mountain Basin

There are no harvest operations planned in this basin for FY07.

East District Isolated Tracts

There are no harvest operations planned in this basin for FY07.

Gales Creek Basin

There is one harvest operation planned in this basin for FY07.

Wildcat: This is a 391-acre moderate partial cut. It is located in an isolated 2,600 acre tract, which was occupied by a pair of spotted owls from 1996 to 2000. The presence of spotted owls has not been detected in the Wildcat Mountain tract during the last five years of survey. Therefore, the occupancy status of the owl site is considered "historic" and no additional protective measures are required. There is a transmission line running through the middle of the sale which will require protective language in the contract.

Larch Mountain Basin

There is one harvest operation planned in the Larch Mountain basin for FY07.

Scotty Dog: This is a 325-acre moderate partial cut. The two main resource impacts of concern are recreational and visual. There are two hiking trails within or near this sale. The Kings Mountain trail runs between Areas 1 and 2, but is located well outside either of these areas. The Wilson River Corridor trail runs through both Areas 1 and 2. Marketing unit personnel and recreation personnel have already discussed ways to minimize impacts to this resource. These strategies are outlined in the pre-operations report. The visual impacts will be minimized by leaving unharvested buffers (at least 100 feet in width) in the few locations where the sale area is in close proximity to the highway. This sale is located within the Ben Smith Creek Salmon Anchor Habitat (SAH). The sale will be designed to conform with SAH guidelines.

McGregor Basin

There are two harvest operations planned in this basin for FY07.

Gregorian Cant: This is a 118 acre heavy partial cut. The sale is within the Upper Rock Creek Salmon Anchor Habitat (SAH), and will be designed to conform to SAH guidelines. The Desired Future Condition (DFC) for this sale is currently designated as General.

Sgt. Rock: This is a 135-acre modified clearcut comprised of two separate areas. Approximately 63 percent of the sale is within the Upper Rock Creek Salmon Anchor Habitat (SAH). This portion of the sale will be designed to conform to SAH guidelines.

The potential for a stream enhancement project will be assessed for the Rock Creek tributaries located adjacent to the sale. In addition to the 5 residual green trees per acre and the 2 hard snags per acre, 2 large trees will be felled upon completion of logging to increase the amount of residual DWD.

Rogers Basin

There are three harvest operations planned in this basin for FY07. In addition, there is one alternate sale planned within this basin.

Rutherford U: This is a 376-acre moderate partial cut. Of special concern are the OHV trails within or adjacent to the operation area. Although most of these trails will be posted outside the operation area, temporary trail closures and post harvest trail cleaning will be part of this operation. Approximately 11 percent of the sale area is within the Devil's Lake Salmon Anchor Habitat (SAH). This portion of the sale area will be designed to conform to SAH guidelines.

Roger's Break: This is a combination sale consisting of a 57-acre modified clearcut and a 361 acre moderate partial cut. Approximately 53 percent of this sale is within the Gales Creek spotted owl circle (occupancy status of "resident single"). A biological assessment is currently being prepared by the NW Area biologist. There are numerous OHV trails in the vicinity of this sale. Marketing unit personnel have been involved with Recreation unit personnel to develop measure to minimize impacts to this resource. In addition, significant OHV trail construction and rehabilitation will be included as project work with this sale.

South Gale (alternate): This is a combination sale with a 44-acre heavy partial cut and a 113-acre modified clearcut. Of special concern is the visual impact to the Wilson River Highway, which is located adjacent to a portion of the sale area. A merchantable tree buffer of irregular widths will be left to reduce or eliminate any visual impacts from the highway.

Upper Elliot: This is a combination sale consisting of 68 acres of a modified clearcut and 137 acres of moderate partial cut. A 4X4 recreational trail runs through this sale. The district OHV coordinator has met with the marketing unit, and has agreed upon measure that will be taken to minimize impacts to the trail. Approximately 70 percent of the sale area is located within the Devil's Lake Fork Salmon Anchor Habitat (SAH). This portion of the sale will be designed to conform to SAH guidelines. At least 9 green trees per acre will be retained in the modified clearcut unit. Of these, two trees per acre will be topped to create snags and one tree per acre will be felled throughout the clearcut area to increase the amount of residual DWD.

Scoggins Creek Basin

There is one alternate harvest operation planned in the Scoggins Creek basin for FY07.

Something Sain (alternate): This is a 134-acre modified clearcut in two separate areas. A small tributary of Sain Creek within Area 1 has been surveyed for fish presence and was determined to be non-fish.

Sunday Creek Basin

There are two harvest operations and one alternate harvest operation planned in this basin for FY07.

Johnny Hairpin: This is a combination sale consisting of a 191-acre moderate partial cut and a 104-acre modified clearcut. An unnamed tributary of the North Fork of the North Fork Trask River divides the sale in two. The ODF&W fish biologist will survey this stream to determine the presence or absence of fish. The fish biologist will assess the North Fork of the North Fork Trask River for a potential stream enhancement project. In addition to the planned green tree retention and the snag creation, 80 trees will be felled throughout the modified clearcut unit to increase the amount of residual DWD.

Reimer Reason: This is a moderate partial cut of 241 acres. Approximately 75 acres are within the Elkhorn Creek Salmon Anchor Habitat (SAH). These acres will be designed to conform with the SAH guidelines.

Windy William (alternate): This is an alternate modified clearcut of 99 acres. An unnamed stream runs adjacent to the sale area. A fish presence survey will be conducted by the ODF&W fish biologist to determine the stream classification.

Upper Salmonberry Basin

There is one harvest operation planned in the Upper Salmonberry basin for FY07.

Toucan Sam: This is a 98-acre modified clearcut. There are no specific resource concerns associated with this sale. The stream within the sale area has been surveyed for fish presence and determined to be non-fish. Green tree retention will be concentrated along this Type N stream.

Wheeler Basin

There are two harvest operations planned in the Wheeler basin for FY07. In addition there is one alternate harvest operation planned within this basin.

Park Place: This sale consists of a 234-acre moderate partial cut. Of special concern is the new ODF campground located directly across the Cochran County Road from this harvest operation. Logging operations adjacent to the Cochran Road will be limited to the time of year when use is low and when the campground is closed. Trails planned within the sale will not be constructed until after the sale has been completed. This operation is within the Lousignont/Upper Nehalem SAH. Stream buffers will be designed in accordance with the SAH guidelines. Two separate areas totaling approximately 11 acres will be designated for creation of snags and DWD only. Eight large trees per acre will be felled for DWD, and one large tree per acre will be topped for snag creation within these 11 acres.

Round Rice (alternate): This is a combination sale consisting of a 107-acre moderate partial cut and a 94-acre modified clearcut. Approximately 59 percent of these acres are within the Lousignont/Upper Nehalem Salmon Anchor Habitat (SAH) and within the Wheeler management basin. Approximately 41% of this sale is actually within the Gales Creek Basin.

Doty's Derby: This is a modified clearcut of 77 acres located within the Lousignont/Upper Nehalem Salmon Anchor Habitat (SAH). The sale will be designed to conform to the SAH guidelines. The surveyed route for the Military Road runs through this sale and is marked with yellow paint dots on trees. These trees will be protected during the harvest operation.

Wilark Basin

There are no harvest operations planned in this basin for FY07.

Forest Roads Management

Overview

Roads are a valuable and necessary asset, providing access to the forest for all forms of activities including forest management activities, fire protection, and recreation. Roads can also be a source of sediment and can impact wildlife, and require significant work and investment to construct and maintain.

In order to provide access to the forest and minimize impacts to the environment, an environmentally sound yet economically efficient road management program is in place on the District. Visions, guiding principles, and techniques that are the backbone of the District's road management program are discussed in detail in the Implementation Plan and the Forest Roads Manual (2000), and govern the planning and implementation of the activities discussed in this section. Planning of the road-related activities is Level III planning, as discussed in the Forest Road Manual.

Road Management Activities under this plan are broken into four categories: Road Construction, Road Improvement, Road Closure/Vacation, and Road Maintenance. Activities are further categorized according to road classification. Refer to the attached Roads Financial Summary Table (Appendix A, Table A-3) and/or presale reports for more detail.

Under this Plan, 16.5 miles of road will be constructed, and 14.5 miles of road will be improved. Of the roads to be improved, 8.4 miles are old legacy roads that will be brought up to current standards and added to the road system. An estimated eleven (11) miles will be closed or vacated, for a net gain of approximately fourteen (14) miles of road to the District's active road system.

Table 4. Summary of Road Management Activities. All values are in miles.

	Mainline (High Use)		Collector (Medium Use)		Spur (Low Use)	
	AOP	IP¹	AOP	IP¹	AOP	IP¹
Road Construction	0	0	0	3-4	16.5	6-9
Road Improvement	0	8-9	6.1	6-7	8.4	1
Road Closure/Vacation	0	0	0	0	11.0	7-9
Road Maintenance – District²	0	-	160	-	65	-
Road Maintenance – Active Operations³	22	-	55	-	34	-

¹ These are annual estimates derived from Table 4-7 (Potential Road Activities FY 2001-2011) of the 2001 District Implementation Plan. The values here were derived by dividing the values in the Potential Road Activities table by 10.

² The road maintenance estimates include only the work to be completed during Fiscal Year 2007 by the district road crew or service contract. Estimates of road maintenance were not made in the Implementation Plan.

³ This is a broad estimate of the road maintenance that may be accomplished during the fiscal year, through active commercial operations. However, the exact amount can not be predicted at this time. Included are third party roads used to access timber sales.

Road Management Considerations

High Landslide Hazard Locations (High Risk Sites)

Roads proposed for construction under this plan will be located on ridge tops or stable side slopes. Geotechnical review is in progress at this time to determine the presence of steep slopes and hazards, and to assess risks. Preliminary reconnaissance indicates that no High Landslide Hazard Locations will be crossed with new road construction in these sales. If locations that have HLHL characteristics are encountered during final reconnaissance or road location on these sales or any others, the NWOA Geotechnical Specialist will be consulted to assess risk and provide design guidance.

Fish Bearing Streams

Two Type F streams will be crossed with new road construction. Fish-passage structures will be installed at each of these crossings. Both are spur roads that will be evaluated for closure upon completion of harvesting, firewood cutting, and/or regeneration. If the roads are closed, the crossings will be removed and the stream channels restored.

In addition there are several small streams that will be crossed with new construction or improved roads. Fish presence or absence will be determined during sale preparation. If fish presence is verified, fish-passage structures will be installed at each of these crossings.

If other streams that appear to have fish-bearing characteristics are encountered during final reconnaissance or road location, they will be assessed by ODFW fish biologists to determine fish presence and the appropriate crossing structures will be designed.

All Type F crossings will be accomplished using bridges, culverts, or other drainage structures that will be designed to ensure fish passage through the structure, according to the current fish-passage guidelines.

Disconnecting the Drainage System

Water from road drainage ditches can add sediment to a stream. A strategy to reduce the amount of sediment entering a stream from ditches has been adopted, in which extra cross drains are installed, as close to the stream crossings as possible. Water from these culverts has an opportunity to filter through natural vegetation, filtering out sediments before the water enters the stream. In this manner, the ditches are "disconnected" from the stream system.

All roads to be constructed or improved under this plan will have culverts installed to disconnect the ditches from streams. In addition, ditch lines will be disconnected on

approximately five (5) miles of existing collector roads that will be used to access the timber sales.

Road Surfacing

Road surfacing is an important component of any road-related activity. Quality surfacing supports all-weather use while reducing road-related impacts to water quality and wildlife habitat.

Approximately 94,000 cubic yards of rock will be mined to surface the roads planned for construction and improvement. Rock required for maintenance will be taken from existing stockpiles.

Of the rock required for construction and improvement, 1,500 cubic yards will be mined as 6"-0 pit run, and 92,500 cubic yards will be mined for crushed rock. The rock will be mined from seven (7) existing rock pits, each of which will be expanded. One new pit will be opened for the Scotty Dog sale. Preliminary reconnaissance indicates that most of the rock can be extracted from an extensive talus slope. A site suitable for rock crushing will have to be developed.

One rock pit will provide rock for three timber sales, and one rock pit will provide rock for two sales. Sufficient rock is available at the pits, but the situation might arise that multiple operators will need to use the pit at the same time. In order to avoid this type of conflict, District personnel will work with purchasers to schedule the work.

In addition, approximately 6,000 cubic yards of rock will be mined to surface existing and planned new trails in the Rogers Basin. Details of this work can be found in the Recreation Management section below.

Water Quality

All road-related work will be done in a manner that minimizes water quality impacts associated with roads. The following steps will be taken to maintain or enhance water quality in all basins, and apply to all road construction, improvement, closure, and maintenance activities:

Soil disturbance will be kept to a minimum. The normal operating period for project work is set in the Timber Sale Contract as that period between April 1 and October 31. Within that time frame, project work will be permitted only when soil conditions allow the work to be accomplished with a minimum amount of sedimentation. Erosion control structures such as silt barriers or hay bales will be used to minimize the movement of sediments.

All work in live streams will be restricted to the in-stream work periods suggested by ODFW (guidelines dated June 2000). The suggested periods vary by basin, and the memorandum will be consulted to ensure that the proper dates are assigned for planned work. On occasion, emergency maintenance will require activities that may

produce sediment, such as cleaning a plugged culvert. The risk of sedimentation from the activity being done will be weighed against the risk of sedimentation if a failure occurs as a result of no action.

All drainage structures on Type N streams will be designed to pass the 50-year flow, as a minimum. Drainage structures on Type F streams will be designed to pass the 100-year flow, and will be designed to allow passage of adult and juvenile fish.

Water quality is an important concern in all basins, but the Gales Creek, Scoggins Creek, and Sunday Creek basins will receive additional emphasis. These basins are tributary to the Tualatin River, a municipal water source.

Slope Stability

During road improvement and maintenance activities, opportunities will be looked for to mitigate excess sidecast material on older existing roads. The current road inventory indicates no risk of sidecast failure in any of the sale areas, but additional reconnaissance will be done during sale layout. If any areas of unstable sidecast are encountered, the unstable material will be pulled back and deposited in stable locations.

Stream Enhancement

ODFW has identified possible opportunities for stream enhancement projects in areas adjacent to FY07 sales. If these projects prove to be feasible, they will be accomplished as timber sale project work. ODFW will be responsible for planning and designing the project, obtaining all necessary permits, and filling all pertinent reports. ODF will be responsible for incorporating the projects into the timber sale contracts. ODFW will administer the projects to ensure design compliance and ODF will administer the projects to ensure contract compliance.

Other Program Support

Other District programs will require support, usually in the form of heavy equipment, as described below:

Public use damage repair - involves repairing damage to roads and adjacent areas due to inappropriate public use, such as motorcycle riding on cut banks or mud holes created by 4-wheel drive vehicles.

Recreation – involves repair or improvement of existing recreation facilities and assistance in the development of new facilities. In addition, assistance will be provided in the form of design consultation and construction administration during the development of planned recreational facilities.

Reforestation - involves opening spur roads to access units requiring some form of management activity, minor amounts of slash piling to facilitate planting, and the

maintenance of heliports. Heliports are strategically located around the District, and provide helicopter access in the event of fire, emergency evacuation of injured people and for fertilization or spray projects.

Road Construction

The road construction activities discussed below are based on the information found in Pre-Operations Reports for FY07. Refer to these reports for maps showing proposed road locations and cost estimates.

Approximately 16.5 miles of roads will be constructed as designated project work for timber sales in the FY07 sale plan. The activity will be in the following basins:

Gales Creek Basin	Wildcat	2.2 miles
Larch Mountain Basin	Scotty Dog	1.0 mile
McGregor Basin	Gregorian Cant	0.9 mile
	Sgt. Rock	0.9 mile
Rogers Basin	Rogers Break	3.3 miles
	Rutherford U	2.9 miles
	Upper Elliot	2.3 miles
Sunday Creek Basin	Johnny Hairpin	0.6 mile
	Reimer Reason	0.9 mile
Upper Salmonberry Basin	Toucan Sam	0.3 mile
Wheeler Basin	Doty's Derby	0.3 mile
	Park Place	0.9 mile
Alternate Sales	Round Rice	1.1 miles
	Something Sain	1.8 miles
	South Gale	1.2 miles
	Windy William	0.2 mile

All of the roads to be constructed are spurs, which are connected to collector roads or other spur roads. These spurs provide access to segments of harvest areas, and will only be used for current harvesting and future management activities in the immediate area. Most of the spurs range between 0.1 and 0.5 miles in length, with one or two spurs between 1.0 and 1.5 miles. These spurs will be constructed to the minimum width necessary to allow operations, and will be evaluated for closure or vacation at the completion of harvest or subsequent reforestation operations.

No collector or mainline roads will be constructed during this planning period.

Road Improvement

Approximately 14.5 miles of roads will be improved as designated project work for timber sales in the FY07 sale plan. The activity will be in the following basins:

Gales Creek Basin	Wildcat	6.1 miles
Larch Mountain Basin	Scotty Dog	1.5 miles
Rogers Basin	Rogers Break Rutherford U	0.8 mile 0.8 mile
Sunday Creek Basin	Johnny Hairpin Reimer Reason	3.7 miles 1.6 miles
Alternate Sale	Windy William	2.7 miles

Approximately 6.4 miles of roads are older legacy roads that are not currently part of the active road network. These roads provide access to harvest units proposed in this plan. Improvement will consist of removing vegetation, excavating material as necessary to improve alignment, establishing drainage, and adding surfacing. These roads will be improved to the Forest Roads Manual spur road (low use) standard, and will be considered for closure or vacation at the completion harvest operations.

Approximately 1.6 miles of existing spur roads will be improved to maintain their standard. These roads provide access to harvest units proposed in this plan. Improvement will consist of removing vegetation, excavating material as necessary to improve alignment, improving drainage, and adding surfacing. These roads will be maintained at the Forest Roads Manual spur road (low use) standard, and will be considered for closure or vacation at the completion harvest operations.

Approximately 2.0 miles of roads are older legacy roads that are not currently part of the active road network. These roads provide access to harvest units proposed in this plan and future units as well. Improvement will consist of removing vegetation, excavating material as necessary to improve alignment, establishing drainage, and adding surfacing. These roads will be improved to the Forest Roads Manual collector road (medium use) standard, and will remain part of the active road system.

Approximately 4.5 miles of existing collector roads will be improved. These roads provide access to harvest units proposed in this plan and future units as well. Improvement will consist of improving drainage and adding surfacing as necessary to maintain their current status. These roads will be improved to the Forest Roads

Manual collector standard (medium use), and will remain part of the active road system.

No mainline roads will be improved during this planning period.

Road Access Management

Restricting traffic on certain identified roads will reduce maintenance costs and sediment loads, as well as reduce the amount of garbage dumping, vandalism, target shooting and unauthorized off-road OHV use. For this plan, 11 miles of road have been identified as candidates for closure. These roads are generally spur roads from previous sales that are in the area adjacent to planned timber sales.

Actual roads to be closed will be selected after a District review identifies those that are no longer needed for short-term management activities. Closure will be accomplished through a combination of timber sale project work and State road maintenance equipment. Individual roads selected for access management will be treated in one of the three following ways:

Road closure – involves blocking the road to traffic, and is accomplished by placing a semi-permanent barricade at the start of the road. This barricade can be a gate, stumps and logs, or a trench. This strategy does not significantly alter the nature of the road, and the obligation to maintain the road remains. Road maintenance needs and sediment loads are reduced due to the elimination of traffic-related wear, but the road is available for future management activities with a relatively small amount of work.

Partial vacation – involves barricading the road and some minor drainage work, which might include the construction of waterbars or rolling drains. This strategy is best suited for a ridge top road, where drainage and sediment issues are negligible. The nature of the road is somewhat altered, and the obligation to maintain the road remains. Sediment loads are reduced due to the elimination of traffic-related wear, and road maintenance needs are greatly reduced. The road can be prepared for future management activities with a moderate amount of work.

Full vacation – involves removing all culverts, constructing waterbars or rolling drains, pulling back any side cast material, and barricading the road. The road is effectively “put to bed”. All vehicle access is prevented, and there is no maintenance obligation. The road can be used again, but will require a significant amount of work to reconstruct it to proper standards.

Road Maintenance

The goals for maintaining roads are to protect the State's investment in the road system, to ensure continued access for all forms of use, and to minimize adverse impacts to water quality and wildlife habitat.

Road maintenance is accomplished by timber sale purchasers and State personnel. Timber sale purchasers are responsible for normal maintenance activities on the roads used to access the sales, and State crews maintain all other roads. On occasion, State crews are required to perform non-normal maintenance on timber sale access roads.

Road maintenance activities will be performed on approximately 365 miles of roads within the District, in all basins. Timber sale purchasers will be responsible for maintenance on approximately 110 miles of road, and State crews will maintain an additional 255 miles. Planned levels of activity are summarized in Table 4.

The basic road maintenance activities are summarized below:

Drainage maintenance – required to ensure that the drainage system is functioning properly. Involves cleaning ditches and culvert inlets, and may involve replacing aged or damaged culverts and installing additional culverts to enhance the drainage system. Approximately 75 to 100 miles of road will be treated for drainage maintenance.

Grading – required to maintain a smooth, stable running surface, and to retain the original surface drainage. Involves grading the road surface to eliminate chuckholes and crown the surface to facilitate drainage. Approximately 175 to 200 miles will be graded.

Rock replacement – required to restore the road surface to its original condition, usually to repair damaged or contaminated surfacing, or surfacing lost to normal wear and tear. Involves placing and processing of rock, usually at specific “spots” or on short segments. Approximately 2 to 3 miles of road will be rocked.

Vegetation Management – required to keep vegetation from encroaching into the road surface, to control the spread of noxious or non-native plants and to enhance visibility for drivers on the road. It is accomplished by mechanical brushing, manual brushing, or the application of herbicides. Approximately five to ten miles will be manually brushed and 30 to 40 miles will be treated with herbicide.

Land Surveying

Property surveys are required to establish property corners and mark the lines defining State ownership. Three (3) miles of property line will be surveyed and marked for sales planned for FY07 and an additional two (2) miles of property line will be surveyed and marked for sales planned for FY08 and beyond. Five (5) miles of property line marked in prior surveys will be retraced and refreshed, if required, for sales planned for FY07 and beyond. This work will be accomplished by either Service Contracts or State personnel.

Twenty (20) existing corners will be maintained in order to preserve their position. This activity requires checking the condition of the monument and its accessories, and establishing new ones if necessary. This work will be accomplished by either Service Contracts or State personnel.

Non-Commercial Forest Management Operations

A full range of silvicultural tools will be employed to achieve the long-term goals of structure-based management and integrated resource management as outlined in the Forest Management Plan. The district's strategy is to use silvicultural tools to establish and maintain diverse stands of well-adapted natural species throughout the landscape to meet these goals. These tools include rehabilitation, site preparation, planting, vegetation management, tree protection, precommercial thinning, fertilization and pruning.

This section describes the types and anticipated amounts of reforestation and stand management activities that will occur in FY07. Also refer to the attached Young Stand Management Table (Appendix A, Table A-4) for further details. The location and amount (acres) of these activities are estimates based on plans, information and conditions as known at this point in time. The type, amount, and specific stand management prescriptions will be further adjusted based on when existing sold harvest units are completed and on updated assessments and surveys that will occur during and after the 2006 growing season.

Rehabilitation

One unit is planned for rehabilitation during this year. This unit has had two plantation failures and will be replanted a third time.

	Acres	Unit Name
Basin		
• McGregor	45	Norwolf

Site Preparation

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

- 1) Slash Burning: Pre harvest evaluations of harvest units indicate that at least three harvest units may require slash burning during FY07. On these units, slash burning is thought to be the most effective method of increasing the number of planting spots, reducing the level of competition, and meeting the goals of the FMP and the IP.

Post harvest assessments will determine the actual necessity to burn.

Basin	Acres	Unit Name – Burn Type
• Rogers	85	Bills Beaver Trap – Broadcast
• Wheeler	76	Along Step – Broadcast
• Wheeler	20	Five Peaks – Pile Burn
	<u>181</u>	

Special concerns: Air quality, soil damage, and escaped fire are concerns with the use of prescribed fire. Prescribed burning will only be used on these areas when environmental conditions are such that there are no substantial impacts to air quality, soil productivity or substantial risk of escape.

- 2) Slash Piling: There are five units that are anticipated to need some amount of slash piling during the fiscal year. These sales have relatively gentle terrain that can be accessed by equipment to do piling without causing substantial soil compaction.

Slash piling is done to create planting spots and to allow the establishment of the desired number of seedlings. Slash piling is utilized where slash prevents establishment of the desired number of trees per acre and slopes are less than 35%; where burning of slash is unsafe due to poor control boundaries; where piling is less costly than other methods; or where the location is in an area where it is difficult to meet smoke management restrictions. Areas anticipated to need some piling following harvest operations are located in the following basins.

Basin	Acres	Unit Name
• Gales Creek	28	North Gale
• Larch Mountain	95	Game Hog, Hem Hog
• McGregor	20	Pit Bull
• Rogers	60	D. Deyoe
	<u>203</u>	

Special concerns: Soil compaction can be a concern when heavy machinery is used on forest soils. Use of machinery for piling on these sites must be restricted to periods of time when soils are dry and not readily compacted.

- 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. Five units may need treatment before planting. Herbicides will only be applied if necessary to insure satisfactory stand establishment and to meet the goals in the FMP and the IP.

Basin	Acres	Unit Name
• Gales Creek	64	North Gale
• Larch Mountain	75	Ground Hog
• McGregor	82	Mac Attack
• Rogers	60	D. Deyoe
• Wheeler	63	Five Peaks
	<u>344</u>	

Special concerns: None yet identified.

Tree Planting

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

- 1) Initial Planting (Clearcut Units): There are an estimated five modified clear-cut units that may be planted during FY07. All of these sites will be planted to allow for the establishment of stands that can be managed for structural diversity. Douglas-fir stock will compose 75%-85% of planting stock on these sites. 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 redcedar, and western white pine. 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 they will experience a high rate of survival and growth. This approach should result in stands that have naturally occurring levels of species diversity and distribution that can be managed for structural diversity.

Basin	Acres	Unit Name
• Gales Creek	64	North Gale
• McGregor	190	Mac Attack, Pit Bull
• Wheeler	139	Along Step, Five Peaks
	<u>393</u>	

- 2) Initial Planting (*Phellinus weirii* treatment areas): There are four sales projected to be ready for planting that have *Phellinus weirii* infections. These areas will be planted with native tree species suited to the site that are either resistant or immune to *Phellinus*. In areas where the disease is moderate some Douglas-fir may be mixed in with the resistant species. Resistant species include western redcedar, western white pine, red alder and western hemlock. *Phellinus* treatment increases stand structure diversity, reduces the spread of *Phellinus weirii*, and establishes merchantable tree species in understocked areas.

Basin	Acres	Unit Name
• Larch Mountain	160	Hem Hog, Ground Hog
• Rogers	80	D. Deyoe, Universal
	<u>240</u>	

- 3) Interplanting: Stands are interplanted when the existing stocking is insufficient to meet the goals in the Forest Management Plan. Surveys are conducted two years after initial planting to determine interplanting needs. Where necessary, interplanting is done the following winter. During the fall of 2006 surveys will be conducted to determine interplanting needs for the 2007 planting season. Based on the recent

number of acres planted and historic trends, the current estimate is that about 50 acres will need to be interplanted.

- 4) Underplanting: Underplanting is done to develop a second cohort in stands where complex structures are planned and insufficient seed source exists for shade tolerant conifers. The additional canopy layers are a necessary component in structurally complex stands. No stands are projected to need this treatment in 2007.

Basin	<u>Acres</u>	Unit Name
	0	

Vegetation Management

These activities are done to reduce light or moisture competition with a young stand of trees to improve survival and growth of these trees. It can also reduce the amount of larger woody plant species, allowing longer retention of herbaceous species which serve as deer and elk forage. 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 may also be done to prevent the spread of noxious non-native plant species. Two particular species that will receive treatment are Scotch broom and Japanese knotweed. Scotch broom spreads from uncontrolled roadside areas into recently thinned stands. Japanese knotweed has been identified and treated along the Wilson River.

Plantations will be evaluated during the spring and summer of 2006 to determine treatment needs for FY 2007. Below is a preliminary plan for FY 2007 however it does not include aerial application of herbicides because more reconnaissance work needs to be accomplished.

Noxious weed treatment will continue throughout the district. Much of this treatment can be considered roadside treatment; however effort will also be made to control the scotch broom where it is spreading from the roadside into the thinned stands. Treatments for knotweed will continue along the Wilson River and in any other areas it is identified.

The three methods of 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. It is not anticipated to use aerial applications for control of noxious weeds.

1) Manual Cutting

Basin	Acres	Unit Name
• Larch Mountain	140	Game Hog Combo, other

2) Aerial Application

Basin	Acres	Unit Name
•	0	
	<hr/>	
	0	

3) Ground-based Application

Basin	Acres	Unit Name
• Gales Creek	96	South Gale
• Scoggins Creek	134	Something Sane
• Wheeler	178	Doty's Derby, coffee bean
• Wilark	10	Wilark Trilogy
	418	

Tree Protection

Tree protection protects young stands from big game damage. Site specific prescriptions are used to match protection tools with specific sites and problems. Big game repellent and various kinds and sizes of physical barriers are the most common kinds of tree protection used in Forest Grove.

- 1) Big game repellent: This activity provides short-term reduction in browse damage to young seedlings from deer and elk. This allows small seedlings time to develop sufficient size to withstand browse damage. A commercially produced mixture containing animal proteins is sprayed onto the foliage of seedlings using backpack sprayers.

At this time no treatments are planned.

- 2) Physical barriers: Physical barriers are applied to prevent the browsing of seedlings by deer and elk. These barriers are man-made materials that are secured around newly planted trees to prevent big game animals from browsing on them. Cedar trees are a favored browse species and require constant protection for several years to prevent high levels of mortality and growth loss. Although this method is relatively expensive, the value of having cedar in the stand for economic and habitat reasons is sufficient to justify the additional cost.

Tree protection with barriers or maintenance work on previously installed barriers is planned on approximately 100 acres across all basins. This includes small pockets of cedar in most of the initial planting units and maintenance in 2, 3, and 4 year old units.

Precommercial Thinning (Density Management)

This activity is done to prevent young non-merchantable stands from experiencing growth stagnation due to overstocking, prolong the time the stand provides forage and open habitat and improve the stand quality by removing less desirable trees. Stands that have been thinned retain more understory vegetation for wildlife forage and develop more rapidly into stands containing large trees. Therefore, there are both habitat and economic reasons for precommercial thinning. Stocking records indicate that there are heavily stocked units that are ready for precommercial thinning in FY 2007. Stand exams will determine the highest need of these. Approximately 300 acres of the highest priority areas will be chosen for FY2007.

Fertilization

Forest fertilization is done to stands to increase the growth rate and productivity of these stands. Target stands to fertilize are well stocked, disease free, moderate site index, 25 – 50 year old Douglas-fir stands. Available soil nitrogen is usually the limiting growth factor on these sites. The greatest growth increase per dollar invested is achieved by the aerial application of nitrogen as a pellet at 435 pounds per acre to selected stands. Growth rates are increased following fertilization for 10-12 years and produce an average of 1000 additional board feet per acre per year.

Fertilization of these stands provides the double benefit of producing more wood volume in less time and moves stands more quickly to the size required for complex stand types. In addition, nitrogen fertilizer increases vigor on many other types of vegetation. This increased vigor to vegetation can benefit a range of wildlife species by providing additional forage and shelter.

Dependent on agency budget levels, current plans call for the fertilization of 3000-5000 acres. These stands will be selected from the pool of acres available for harvest between FY 2011 to FY 2021.

Pruning

Pruning of stands may be done to improve wood quality, reduce tree mortality from bear damage or prevent fungal infection in western white pine.

The value of Douglas-fir and red alder logs is increased by the removal of branches from the bottom to 18 feet of tree bole and allowing the tree to develop clear wood in the lower bole.

It has also been found that removal of these branches reduces the desirability of Douglas-fir trees for feeding by black bears and results in less damage to the stand from bears. The current strategy is to control branch size by maintaining stand density at a high enough level to cause “self pruning” of trees. But, if bear damage is found to be causing significant losses, additional stands may be included to the pruning treatment later as needed.

Pruning is also done on western white pine to reduce infection from the blister rust fungus on this species. Blister rust is inevitably fatal to younger trees if no preventative actions are taken. Planting and pruning of this species allows this naturally occurring and ecologically valuable species to be retained in these stands.

Pruning in general has the additional benefit of reducing the forest canopy and allowing longer retention of understory vegetation. Pruning thereby reduces the time stands will spend in the “closed canopy” stage and increases the time the stand is in the “understory” stage. Understory stands are more useful for wildlife habitat than are closed canopy stands. Pruning is normally done in 2-3 “lifts” over multiple years as the tree growth allows. Following is a list of planned acres by type of pruning and species.

Type of Pruning	Acres	Unit Names
• Douglas-fir – value	0	
• Douglas-fir – bear damage prevention	0	
• White pine disease prevention	45	Upper Scoggins, Not Flat Mac, BLT#5, Camp Five Thin, other
• Red Alder – value	75	Game Hog Combo, Rudy's Bend
	120	

Recreation Management

Overview of Recreation Management

Recreation use on the Forest Grove District continues to grow. Camping, fishing, hunting, sight seeing and trail use are the more popular activities on the district. Developed facilities on the district include five campgrounds, two day use picnic areas and eleven trailheads that provide access to a growing network of trails. Mountain biking, hiking, horseback riding, and motorcycle, quad and four-wheel drive trail use take place year round. There are currently 58 miles of Off-Highway Vehicle (OHV) and 50 miles of non-motorized trails on the district.

The recreational management activities identified below cover the following four broad categories and identify how the network of developed facilities and trails will be maintained and expanded in FY07. (1) new development and improvement of recreational trails and facilities, (2) management of existing trails and facilities, (3) development of new programs, and (4) management of current programs and uses. These actions and activities are based on the goals, objectives, and action priorities established in the NW Oregon State Forests Management Plan and the Tillamook State Forest Recreation Action Plan Update (2000).

Maps for recreation management projects marked with a () are included in Appendix C.*

The recreation management activities planned for FY07 are based on the assumptions that fiscal budget levels will remain at current levels and that most facility development will be accomplished with contract, district and South Fork resources, volunteers, and with grant dollars.

Facilities Development (Campgrounds, View Points, Trail Heads, Staging Areas, etc.)

In Fiscal Year (FY) 2007, the Forest Grove District will be in varying stages of planning and development for the following campground and trailhead facility.

Lyda Camp OHV Campground and Staging Area* (Rogers Basin)

Lyda Camp is one of the larger dispersed camping and undeveloped OHV staging areas on the Forest Grove District.

FY 07 work will include:

- Submitting an ATV Fund grant application.
- Preparation of construction contract.

Considerations

The South Fork of the Wilson and a smaller tributary to the South Fork Wilson border the site. Issues related to water quality will need to be addressed during the planning and design of the facility and during construction.

The area is split by a mainline access and haul road. The truck and public road traffic needs to be addressed during the construction phase.

In 1995/1996 several buried barrels containing chemical herbicide residue were excavated when crews were preparing to install temporary vault toilet facilities. There is the potential for other barrels to exist in the area.

Resource Specialist or Project Cooperators

District Engineer and Management Unit Forester: To help define and address issues related to other forest operation plans in the area.

Developed Facility Upgrades

Rogers Camp Trailhead

- Surfacing and Grading
- Rail fence replacement and addition
- Site landscaping for interpretive sign installation
- Picnic table addition

Stagecoach Horsecamp

- Replace all 9 corral units
- Campsite improvement (enlarge parking and living areas)

CXT Toilet Upgrades

- Replace damaged and rusted doors and vent screens on Gales Creek, Elk Creek, Rogers Camp and Browns Camp buildings.

Picnic Table Upgrades

- Replace damaged and vandalized table tops and benches at Gales Creek, Elk Creek, Browns Camp and Stagecoach Horsecamp.

Reehers Camp

- Construct storage shed at Camp Host site.

Facilities Operations (Campgrounds, View Points, Trail Heads, Staging Areas, etc.)

The Forest Grove District is responsible for operations and public use management at five fee campgrounds with day-use areas, seven developed and designated trailheads, and one interpretive site/overlook. These developed facilities and the public use that occurs at them requires a high level of management and maintenance presence in order to meet operations standards.

Activities associated with facility operations include:

- Campground host recruitment and supervision.
- Coordination of daily maintenance activity by South Fork inmate and seasonal recreation crews.
- Well water testing.
- Scheduling of garbage and recycling service, vault toilet pumping, and well maintenance.
- Completion of weekly facility condition assessments and coordination of facility repairs.
- Vegetation management.
- Sign and information board management.
- Fee Collection.
- Public contact/use management.
- Public use monitoring.

Resource Specialist or Project Cooperators

- Tillamook County Sheriffs Office
- Private companies responsible for maintenance and repair services.
- Admin Unit/Office Manager
- District Engineer
- Public/user group clubs and organizations

Undeveloped Facility Operations and Dispersed Site Management

The district has several undeveloped facilities and dozens of dispersed campsite areas that require a maintenance and operations presence. The dispersed sites are scattered throughout the forest. Most are used year round, with some of them receiving the heaviest use during hunting season.

Activities associated with undeveloped facility operations and dispersed site management include:

- Coordination of maintenance activity by South Fork inmate and seasonal recreation crews. South Fork crews complete site cleanup at each of the undeveloped sites on

a weekly basis. Dispersed sites are cleaned up at least twice a month during the high use season.

- Inventory and site condition assessments.
- Planning for restoration and improvement work
- Site closure and rehabilitation
- Resource enhancement
- Vegetation management.
- Regulatory sign and information board sign management.
- Public contact and monitoring.

Planning

- Develop Wilson River Corridor Plan to address issues and opportunities associated with public use of the dispersed sites located along the Wilson River.

Dispersed sites proposed for restoration and improvement

- McNamers Camp

Resource Specialist or Project Cooperators

- South Fork
- Tillamook County Sheriffs Office
- Unit Forester and District Engineer
- Public/user group clubs and organizations
- Volunteer Trail Patrol

Trail Development

New trail projects that will be active in various stages during FY07 include:

OHV Trails (Rogers Basin)

Planning Projects

- Update the Rogers Basin OHV Trail Plan

Location and Design Projects

- Firebreak One Reroute* - (Rogers Break)
- University Firepower Reroute* - (D Deyoe)
- Chute Trail Reroute* – (Universal)

Construction Projects

- Airplane Trail reroute* (MC, Quad & 4WD). Total project length is 1 mile. FY07 work will complete construction of ½ mile of the project.
- Firebreak Five reroute* (MC, Quad & 4WD). Total project length is ¾ mile. FY07 work will complete construction of ½ mile of the project.

Non-motorized Trails

Planning Projects

- Complete Trail Plan for Mountain Bike Area 1 (Larch Mountain Basin).

Location and Design Projects

- Reehers Camp Trails* (horse, hiker, mountain bike) (Wheeler Basin) – FY07 work will complete location and design work for 2.0 miles of trail.

Construction Projects

- Reehers Camp River Access Trail* (Wheeler Basin). Total project length is $\frac{3}{4}$ of a mile. FY07 work will complete construction of the entire project.
- Nels Rogers Trail* (Rogers Basin). Replacement of an old 20 foot dimensioned lumber trailbridge.
- Gales Creek Trail* (Gales Creek Basin). Replacement of an old 15 foot log stringer trailbridge.
- Reehers Camp Trails* (horse, hiker, mountain bike) (Wheeler Basin) – The Reehers Camp Trails project is being located and constructed in segments and phases. FY07 work will construct 2.0 miles of trail.

Considerations

Water quality, slope stability, and wildlife issues will need to be identified and addressed during the planning, location and design, and construction phases of each of the projects.

Resource Specialist or Project Cooperators

- South Fork Camp
- Management, Engineering and Reforestation units for integration with other planned management activities.
- Area Geotech
- ODF&W
- Public/user group clubs and organizations

Trail Assessments and Upgrades

In FY07 trail upgrade plans will be developed for the following OHV trails in the Rogers Basin

- Bates Road Trail (MC, quad, 4WD) 1.6 miles

- Blackwater 50 Trail (MC, quad) 1 mile
- Island Trail (MC, quad) 1.5 miles
- Chute Trail (MC, quad) 3.0 miles

In FY07 trail upgrade work, including grading, drainage, surface hardening and new trail segment construction will occur on the following trails:

- Crooked Bridge Trail* Drainage, grading and surface hardening 1.0 mi.
- Sidewinder Trail* Drainage, grading and surface hardening 3.8 mi.
- Julie's Trail* Drainage, grading and surface hardening 0.7 mi.
- Clydes Trail* Drainage, grading and surface hardening 2.5 mi.
- Elliott Creek Trail* Drainage, grading and surface hardening 2.2 mi.

Trail Maintenance

Trail use has been steadily increasing on both the OHV trail system and the Non-motorized trail system. The increased use is affecting trail condition and increasing the need for a consistent high level of maintenance in order to minimize impact to the trail resource and impacts to water quality.

There are 58 miles of designated OHV trails and 50 miles of designated Non-motorized trails on the district. The majority of the trails are in the Rogers Basin. Trail maintenance activity includes the completion of trail condition assessments on a regular basis (quarterly), development of maintenance strategies, and completion of maintenance work. Trail maintenance work typically involves cleaning waterbars, cleaning out culverts, basic trail tread work, repairing trailbridges, clearing downed trees, brushing, and sign replacement. Trail maintenance work will be accomplished using volunteers, South Fork crews, youth corps crews, and district staff and equipment.

The table below summarizes the maintenance work planned for FY2007.

PROJECT WORK	QUANTITY	COMMENTS
Trail Condition Assessments	- 48 miles of non-motorized trail - 58 miles of OHV trail	Non-motorized trail assessments completed quarterly. OHV trail maintenance assessments are ongoing. Utilize volunteers for trail condition assessments
Trail Maintenance	- 35 to 40 miles of non-motorized trail. - 10 to 15 miles of OHV trail	Utilize South Fork crews, youth corps, crews, volunteer crews, contract crews and district staff and equipment to complete work

Considerations

Trail assessments and the resulting maintenance plans will focus on drainage, water quality and safety issues.

Resource Specialist or Project Cooperators

South Fork
Integration with other Units
ODF&W
Public/user group clubs and organizations

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
Trail System Planning	Trail Patrol
Adopt a Trail	SWECO Volunteer Operator
Event Steward Program	Forest Clean-up

Activities associated with the volunteer program will include the recruitment, hiring, and management of campground hosts; planning and management of trail maintenance, trail development, and special volunteer projects; management of the SWECO trail dozer volunteer operator program; facilitation and management of trail planning efforts; implementation of the Adopt a Trail program; and management of the Tillamook State Forest Volunteer Trail Patrol program. The Recreation Program anticipates facilitating over 6000 hours of volunteer contribution in FY2007.

Specialist needs/Cooperators

Integration with other Units
Public/user group clubs and organizations
Administrative Unit support

Event Management

The Forest Grove district permits organized trail club 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, four-wheel drive rallies, and Rally car races. Other events, such as equestrian poker rides, mountain bike races, running races, and archery events are scheduled less frequently. In FY 2007 the district expects to review, permit and administer 4 to 6 events.

Land Management Classification

As required under OAR 629-035-0050, Forest Land Management Classifications (FLMCS), and for the purposes of implementing the FMP's forest resource management strategies, all forest lands have been classified within the planning area to describe the types of management that a District will apply to particular areas of the land base, the appropriate range of management activities for these areas and the forest resource or resources the classifications are intended to address. The system identifies when a particular forest resource may need a more focused approach, or possibly an exclusive priority, in management. State Forest Lands are classified into one of three classifications: General Stewardship, Focused Stewardship, or Special Stewardship. Descriptions and methods of the classifications are found in the Forest Management Plan beginning on page 2-56.

Focused and Special Stewardship classifications are further classified into subclasses based upon the existence of forest resources that require some level of supplemental planning and/or modified management practices to help achieve identified goals. Several subclasses may be assigned to a parcel of land. Where this occurs, the resource requiring the highest level of protection will determine the management approach. A complete list and specific definitions of the subclasses can be found in OAR 629-035-0055.

Total acreage for each classification and subclass can be found in the Forest Grove District IP on page 14.

The acreage and boundary lines shown on maps for forest land management classifications are approximate. The information will be updated through watershed assessments, planning for site-specific management activities or site-specific field visits conducted over time. Management activities will be conducted based upon exact areas and locations as determined on the site and will depend upon the conditions that exist on the site.

Land Exchange

There are no active land exchange projects for this AOP.

Other Integrated Forest Management Operations

The district administers an active public woodcutting program issuing between 400 and 600 permits annually, generating \$4,000 to \$6,000 in gross revenue. 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 necessary for recovery of windthrown 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 SERVICES)

Below are the significant district-level planning projects currently scheduled for commencement, completion, or both in FY07.

Stand Level Inventory and Other Vegetation Inventories

Stand Level Inventory (SLI) will be completed on approximately 40 stands in the Forest Grove District during FY07. The total acreage of these stands is approximately 3,949 acres (3% of the district). Work will be completed under the statewide SLI contract. FY07 proposed timber sale areas will be a top priority. No FY07 modified clearcut or heavy partial cut timber sale will be submitted to Salem until SLI plots have been completed for that sale. By the end of FY07, over half of the District will have updated SLI data. The stand level inventory will be used for prescription development, AOP implementation, monitoring, and other planning purposes.

The district will also be conducting stocking and survival surveys in young stands and plantations. The surveys are used to determine stocking levels, needs for tree planting, release, or pre-commercial thinning.

Fish and Wildlife Surveys

Northern Spotted Owl Surveys

For FY07 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 Forest Management Plan (FMP) goals. Survey requirements for each sale are determined in accordance with November, 2002 ODF Policy Guidance: *Northern Spotted Owl Surveying on State Forest Lands*. The survey methodology utilized by ODF is the *Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls*. This protocol, originally dated March 1991 and revised March 1992, is endorsed by the USFWS.

Thirteen of the 16 sales in the FY07 sale plan (including Tier 2 sales) are being surveyed for northern spotted owls, due to the presence of potentially suitable spotted owl habitat within or adjacent to the sale areas. A two-year survey (minimum of three visits per year) will be completed for each of these sales. The first year of survey was conducted in 2005 for 12 of the 13 sales that were identified as potentially suitable spotted owl habitat. The second year of survey will be completed for these sales in 2006. One of the 13 sales that were identified as potentially suitable habitat was surveyed in 2004 and 2005, as it was an alternate sale in the FY06 sale plan. A third-year survey will be conducted for this sale in 2006. Spotted owl surveys are not required for 3 of the 16 sales in the FY07 sale plan, due to: 1.) the absence of potentially suitable habitat within or adjacent to the

sale area (determination made by the ODF wildlife biologist for the NW Oregon Area), **and/or** 2.) the sale area is within the Tillamook Burn (see November, 2002 ODF Policy Guidance: *Northern Spotted Owl Surveying on State Forest Lands*). Survey requirements for each of the FY07 sales are summarized in the table below. In addition to the spotted owl survey program associated with planned timber sales, monitoring surveys of known spotted owl sites will continue in FY07, in order to determine site occupancy and the pair, nesting, and reproductive status of resident owls.

Marbled Murrelet Surveys

For FY07 sales, Forest Grove District will also continue its marbled murrelet survey program, in order to comply with federal and state Endangered Species Acts and to contribute to Forest Management Plan (FMP) goals. Survey requirements for each sale are determined in accordance with November, 2004 ODF Policy Guidance: *Marbled Murrelet Operational Policy, 2004 Revision*. The survey methodology and standards utilized by ODF are based on the protocol developed by the Pacific Seabird Group (2003 revision).

Three of the 16 sales in the FY07 sale plan (including Tier 2 sales) will be surveyed for marbled murrelets, due to the presence of potentially suitable murrelet habitat within or adjacent to the sale areas. Each of the three sales will be surveyed for two years, with a minimum of five visits per year. The first year of survey was conducted in 2005 for the 3 sales that were identified as potentially suitable marbled murrelet habitat. The second year of survey will be completed for these sales in 2006. Marbled murrelet surveys are not required for 13 of the 16 sales in the FY07 sale plan, due to the absence of potentially suitable habitat within or adjacent to the sale areas. The ODF wildlife biologist for the NW Oregon Area made the determination that these sale areas are not suitable habitat for marbled murrelets. Survey requirements for each of the FY07 sales are summarized in the table below. The presence of marbled murrelets has never been detected on the Forest Grove District during the past 12 years of survey. Therefore, there are no known occupied murrelet sites and no monitoring surveys will be conducted.

Table 5. Summary of status of T&E surveys.

Operation	Species NSO/MM*	Status
Doty's Derby**	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Gregorian Cant	NSO	The first year of survey was conducted in 2004, the second year of survey was completed in 2005, and a third-year survey will be conducted in 2006.
Johnny Hairpin	----	Spotted owl surveys are not required, due to: 1.) The absence of potentially suitable habitat within or adjacent to the sale area (determination made by Clint Smith, ODF wildlife biologist for the NW Oregon Area) and/or 2.) The sale area is within the Tillamook Burn (see November, 2002 ODF Policy Guidance: Northern Spotted Owl Surveying on State Forest Lands).
Park Place	NSO/MM	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Reimer Reason	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Rogers Break	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Round Rice	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Rutherford U.	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Scotty Dog	----	Spotted owl surveys are not required, due to: 1.) The absence of potentially suitable habitat within or adjacent to the sale area (determination made by Clint Smith, ODF wildlife biologist for the NW Oregon Area) and/or 2.) The sale area is within the Tillamook Burn (see November, 2002 ODF Policy Guidance: Northern Spotted Owl Surveying on State Forest Lands).
Sgt. Rock	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Something Sain**	NSO/MM	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
South Gale	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Toucan Sam**	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Upper Elliot**	NSO	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Wildcat	NSO/MM	The first year of survey was conducted in 2005, and the second year of survey will be completed in 2006.
Windy William**	----	Spotted owl surveys are not required, due to: 1.) The absence of potentially suitable habitat within or adjacent to the sale area (determination made by Clint Smith, ODF wildlife biologist for the NW Oregon Area) and/or 2.) The sale area is within the Tillamook Burn (see November, 2002 ODF Policy Guidance: Northern Spotted Owl Surveying on State Forest Lands).

* If marbled murrelets ("MM") are not listed under the species column, then murrelet surveys are not required due to the absence of potentially suitable habitat.

** Alternate sales

Plants

ODF protects listed plant species in accordance with the state and federal Endangered Species Acts (ESA), Oregon Revised Statutes (ORS), and Oregon Administrative Rules (OAR). The overall policy context and procedures for ODF's management of plants is described in the August 1, 1995 document *Procedures for Complying With Federal and State ESA's for Plants*. This policy framework is supplemented by specific strategies for plants in the Forest Management Plan.

The proposed harvest activities in the FY07 sale plan were reviewed to identify potential conflicts with listed plant species. The sales in the FY07 sale plan do not conflict with any known protected plant locations.

Fish Presence Surveys

In order to determine the proper stream classification and extent of fish use in selected streams, fish presence surveys will be conducted by Oregon Department of Fish and Wildlife (ODFW) for eight FY07 sales: Johnny Hairpin, Round Rice, Scotty Dog, Sgt. Rock, Something Sain, South Gale, Toucan Sam, and Windy William.

Watershed Assessments

ODF is committed to perform watershed analysis on key watersheds on State Forest Lands. Watershed analysis will be used to gain insights into the interaction between ecological resources and forest management. This, in turn, will provide information for future Implementation Plans and Annual Operation Plans. A watershed assessment and analysis is scheduled for the Wilson River Basin during FY07 (July 1, 2006 to June 30, 2007). Project design for the Wilson River Basin Watershed Analysis will be initiated during the early spring of 2006. A contract will be awarded for the project and work will begin for this basin during the late spring. Separate data gathering projects (including Road Inventory Management System [RIMS] work, ODFW aquatic habitat surveys, and slope stability and geomorphology terrain modeling) will also be completed during FY07 to support the Wilson River Basin Watershed Analysis process. The assessment and analysis work for the Wilson River Basin is scheduled to be completed by the spring of 2007.

Research and Monitoring

The Forest Grove District will be involved in a variety of research and monitoring projects in FY07. Examples include:

- ◆ Red alder research areas.
- ◆ White Pine Blister Rust resistance studies.
- ◆ CFER research areas (commercial thinning and wildlife studies).
- ◆ Commercial thinning and *Phellinus weirii* research areas.

- ◆ Commercial thinning and Swiss Needle Cast study areas.
- ◆ Riparian zone functions study areas.
- ◆ Green tree retention and seedling growth demonstration areas.
- ◆ Headwater amphibian research project.

District personnel have been and may continue to participate in many of these projects.

Other Planning Operations

Other planning activities will include completion of comprehensive trail plans, Lyda Camp development plans, grant project proposals, 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 FY07 Annual Operations Plan. In addition, public involvement activities concerning the Recreation program will include planning and facilitating monthly OHV trail planning meetings, quarterly Non-motorized trail planning meetings, quarterly Tillamook Recreation Advisory Committee (TRAC) meetings, Volunteer Trail Patrol meetings, 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. Activities will include:

- ◆ Maintenance of the Tillamook State Forest web page and recreation information phone line.
- ◆ Development of information board messages.
- ◆ Modifications to and reprints of the OHV and Non-motorized trail guides.
- ◆ Writing articles for user group newsletters and the Tillamook Times newsletter.
- ◆ Further development of traveling field displays used to inform and educate OHV users about responsible use and to recruit volunteers for specific projects and programs.
- ◆ Support for local OHV user group education programs.
- ◆ Support and participation in NWOA Forestry education and interpretive programs.

ADMINISTRATION

There are currently 23 full time and 10 part time positions on the Forest Grove District funded for the management of State Forest lands that equate to 26.87 Full Time Equivalent (FTE) positions. The Forest Grove District State Forest staffing organization is divided into the following functional groups.

- ◆ **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. (5.12 FTE)
- ◆ The **Engineering 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. (6.25 FTE)
- ◆ The **Forest Management / Marketing Unit** is responsible for the planning, preparation and administration of all State forest timber sales on the district, including planning and administering threatened and endangered (T&E) species surveys and developing and maintaining the district Geographic Information Systems (GIS) data. (7 FTE)
- ◆ 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, staging areas), development and management of volunteer programs, public contact and information, and monitoring and assessment of overall recreational use patterns. (6.18 FTE)
- ◆ 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. (2.32 FTE)

Comment [MT1]: I came up with 5.12

Comment [MT2]: I came up with 6.25 including Bruce Harris, who works for rec but is supervised by Greg.

Comment [MT3]: I came up with 7 FTE including LD GIS/PLANNER, not counting double fill FMT seasonal

Comment [MT4]: I came up with 6.18

Comment [MT5]: I came up with 2.32, not counting double fill seasonal FMT position.

APPENDICES

- A. Summary Tables
- B. Pre-Operations Reports
- C. Recreation Exhibits
- D. Public Comments