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FOREST GROVE DISTRICT

2008 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, 2007 to June 30, 2008 (FY08). This document summarizes the activities and projects in FY08 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 FY08 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 FY08. 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 FY08 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 2008 harvest levels¹, the district has included 62.0 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 has included two alternate operations in this Annual Operations Plan. These alternate operations may be used to replace regular sales that cannot be completed as planned.

Additionally, the department is continuing its Implementation Plan Revision Process following the guidance provided by the State Forester³. Phase I of this process consisted of additional model runs that help inform the 08 harvest level. Phase II of the Implementation Plan Revision Process is examining: the implementation planning framework, and associated policies and procedures; alternative strategies for the management and protection of species of concern; and upgrades to the program's model, including significant improvements to the forest inventory and yield tables. This phase is expected to be completed by the end of 2007.

At the end of Phase II, additional model runs will occur and districts will conduct an intensive review of the outputs from these model runs. The outcomes of this Implementation Plan Revision Process will help identify changes that may need to occur to the Implementation Plans. As previously noted from the Harvest and Habitat Model Project⁴, such changes are likely to include adjustment to the mixture of regeneration and partial cut harvests needed to meet Forest Management Plan goals and objectives.

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		2008 AOP Objective
	Low	High	
Conifer Partial Cut	2,365	3,547	2,380
Conifer Regeneration Cut	338	1,100	735
Hardwood Partial Cut	0	0	0
Hardwood Clearcut	0	0	0
Rehabilitation	0	0	0
Reforestation (Initial Planting)	250	650	517
Precommercial Thinning	100	300	300
Fertilization	3,000	6,000	4,000
Pruning	100	400	110

¹ Memo RE: State Forest Harvest Levels – fiscal years 2007 and 2008 dated December 20, 2006 from the State Forester

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

³ Memo RE: State Forest Implementation Plans dated June 5, 2006 from the State Forester

⁴ Harvest & Habitat Model Project Final Report completed March 8, 2006 by the Oregon Department of Forestry

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 FY08 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"⁵), 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

⁵ 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 735 acres of regeneration harvest planned for FY08 represents 0.6 percent of the district. During the year 2007 approximately 260 acres will grow out of the Regeneration (REG) stand type, resulting in a 0.4 percent increase in the district percentage of the REG stand type. Of the 735 acres planned for regeneration harvest 100 percent will be designed as modified clearcuts. Of the 2,380 acres of partial cut, approximately 79 percent are planned for moderate partial cut and 21 percent are planned for heavy partial cut. Complete harvest type definitions can be found at the following site (scroll to bottom of this web page):

http://egov.oregon.gov/ODF/STATE_FORESTS/planning.shtml#ANNUAL_OPERATION_S_PLANS_AOPs

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).

Stand Level Inventory has been completed for all of the FY08 sales. Existing Class 1 and 2 DWD levels in the FY08 planned sales averages 215 cubic feet per acre for the regeneration harvest units and 165 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	GEN¹
Current	0	489	2,626	0	0	0
Post Harvest²	735	0	2,380	0	0	0
Desired Future	0	0	0	931	977	1,207

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 FY08 AOP is estimated to generate gross revenues of approximately \$22,689,000 and net revenues of \$21,301,900. 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 FY08 will be summarized in the context of the eleven management basins on the Forest Grove District. Several resource specialists reviewed the FY08 AOP and provided input. The summary for each sale reflects resources requiring special consideration that were 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	2008 AOP		Cumulative Operations ¹ (FY 02, 03, 04, 05, 06, 07, 08)	
		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	247	0	1,580	454
Larch Mountain	13,157	121	0	1,969	157
McGregor	10,618	0	114	2,761	840
Rogers	20,844	521	239	4,238	738
Scoggins Creek	3,018	0	0	340	43
Sunday Creek	15,287	656	0	4,067	146
Upper Salmonberry	18,879	245	202	3,452	559
Wheeler	16,142	590	180	2,849	597
Wilark	4,596	0	0	486	170
	114,989	2,380	735	21,875	3,704

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 FY08.

East District Isolated Tracts

There are no harvest operations planned in this basin for FY08.

Gales Creek Basin

There is one harvest operation planned in this basin for FY08.

Wildcat Stevens: This is a 247-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 six years of survey. Therefore, the occupancy status of the owl site is considered "historic" and no additional protective measures are required.

Larch Mountain Basin

There is one harvest operation planned in the Larch Mountain basin for FY08.

Cougar Ridge: This is a 121-acre moderate partial cut. During the 2006 survey season, a spotted owl was heard within 1.5 miles of Cougar Ridge during two separate nighttime surveys. The first 2006 response was a vocalization that is characteristic of both sexes; therefore it is unknown whether the first observation was a male or a female. The owl was not located during the daytime follow-up visit. The second 2006 nighttime response was detected during the third additional visit. The response was confirmed as a female, but she was not located during the daytime follow-up visit. Therefore, the status of the two observations was classified as "non-territorial single" in 2006. A second year of survey will be completed in 2007. All surveys were/will be conducted in accordance with USFWS protocol.

McGregor Basin

There is one harvest operation planned in this basin for FY08.

Moose and Squirrel: This is a 114 acre modified clearcut. The sale is bordered by a Medium Type F stream on the west.

Rogers Basin

There are two harvest operations planned in this basin for FY08.

C-addle: This is a combination sale with 318 acres of moderate partial cut and 148 acres of modified clearcut. Of special concern are the OHV trails within or adjacent to the operation area. Temporary trail closures and post harvest trail cleaning will be part of this operation. Approximately 111 acres of the moderate partial cut is actually a group selection. Gaps ranging from ½ acre to 1 and ½ acres will be created throughout the 111 acre area in a random pattern. These gaps will total approximately 1/3 of the stand. The other 2/3's of this area will remain untreated.

U. Falls Incline: This is a combination sale consisting of a 91-acre modified clearcut and a 203 acre moderate partial cut. There are numerous OHV trails within and adjacent to this sale. Marketing unit personnel have been involved with Recreation unit personnel to develop measures to minimize impacts to this resource.

The Wilson River Wagon Road transects Area 3 of U. Falls Incline. The district will consult the Public Use Coordinator (ODF Salem Staff) for appropriate protection measures of this cultural resource.

All of Area 1 and part of Area 2 have a visual classification of Level 1 (high sensitivity) and are therefore classified as Focused Stewardship, Visual Subclass. The visual impacts of the sale location and prescription have been analyzed and determined to be minimal due to the prescription degree of visibility of from the highway.

Area 1 and Area 3 contain Special Stewardship, Operationally Limited Subclass. the Geotechnical Specialist will be consulted to determine if a field visit is needed.

During the 2006 survey season, a spotted owl was heard within 1.5 miles of U-Falls Incline during two separate nighttime surveys. The first 2006 response was a vocalization that is characteristic of both sexes; therefore it is unknown whether the first observation was a male or a female. The owl was not located during the daytime follow-up visit. The second 2006 nighttime response was detected during the third additional visit. The response was confirmed as a female, but she was not located during the daytime follow-up visit. Therefore, the status of the two observations was classified as "non-territorial single" in 2006. A second year of survey will be completed in 2007. All surveys were/will be conducted in accordance with USFWS protocol.

Scoggins Creek Basin

There are no harvest operations planned in the Scoggins Creek basin for FY08.

Sunday Creek Basin

There are two harvest operations planned in this basin for FY08.

Nine To Five: This is a 383-acre moderate partial cut. There are no significant concerns associated with this sale.

Sunday Punch: This is a 273-acre moderate partial cut. There are no significant concerns associated with this sale.

Upper Salmonberry Basin

There are three harvest operations planned in the Upper Salmonberry basin for FY08.

Joe Cockeran: This is a combination sale consisting of two modified clearcut areas totaling 168 acres and two moderate partial cut areas totaling 89 acres. Approximately 13 acres of the modified clearcut area has a DFC of Layered. It is the district's opinion that the best pathway to get these acres to a Layered stand condition is a modified clearcut with an extra heavy green tree retention design. This design will include leaving the 14 largest trees per acre and then underplanting with a variety of conifer tree species.

Salmon Derby: This is a combination sale. Only the 69 acre moderate partial cut area is within the Upper Salmonberry Basin. The modified clearcut area is in the Wheeler basin. There are no specific resource concerns associated with this sale.

Wiley Coyote: This is a combination sale consisting of a 34 acre modified clearcut and a 87 acre heavy partial cut. There are no significant concerns associated with this sale.

Wheeler Basin

There are four harvest operations planned in the Wheeler basin for FY08.

Eye Of The Tiger: This sale is 257 acres of heavy partial cut. The DFC is complex. The sale area will be underplanted to establish a conifer understory and move this stand towards a more complex structure than currently exists. This sale is within the Nehalem/Lousignont Salmon Anchor Habitat. Stream buffers will be designed in accordance with the SAH guidelines.

Round Rice: This is a combination sale consisting of a 107-acre moderate partial cut and a 94-acre modified clearcut. Approximately 59% of these acres are within the Lousignont/Upper Nehalem Salmon Anchor Habitat (SAH) and within the Wheeler management basin. Stream buffers within the SAH will be designed in accordance with the SAH guidelines. The remaining 41% of this sale is within the Gales Creek Basin.

Salmon Derby: This is a combination sale. Only the 86 acre modified clearcut area is within the Wheeler Basin. The moderate partial cut area is in the Upper Salmonberry

Basin. The clearcut area is within the Lousignont/Upper Nehalem SAH. Stream buffers will be designed in accordance with the SAH guidelines.

Steel Shield: This is a partial cut sale. Approximately 112 acres are moderate partial cut and 116 acres are heavy partial cut. This sale is within the Rock Creek Salmon Anchor Habitat (SAH). Stream buffers will be designed in accordance with the SAH guidelines.

Wilark Basin

There are no harvest operations planned in this basin for FY08.

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, 15.0 miles of road will be constructed, and 17.3 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. An estimated eleven (11) miles will be closed or vacated, for a net gain of approximately four (4) 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	15.0	6-9
Road Improvement	0	8-9	16.2	6-7	1.1	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 2008 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

One known Type F stream will be crossed with road improvement, and one stream that is assumed to be Type F 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 77,000 cubic yards of rock will be mined or taken from existing stockpiles 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, 17,000 cubic yards will be 6"-0 pit run, and 60,000 cubic yards will be crushed rock. The rock will be mined from eight (8) existing rock pits, each of which will be expanded. No new pits will be opened.

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.

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 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 FY08 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 FY08. Refer to these reports for maps showing proposed road locations and cost estimates.

Approximately 15.0 miles of roads will be constructed as designated project work for timber sales in the FY08 sale plan. The activity will be in the following basins:

Gales Creek Basin	Wildcat Stevens	2.0 miles
Larch Mountain Basin	Cougar Ridge	0.8 mile
McGregor Basin	Moose and Squirrel	0.1 mile
Rogers Basin	C-addle	1.8 miles
	U Falls Incline	0.8 mile
Sunday Creek Basin	Nine to Five	2.1 miles
	Sunday Punch	0.5 mile
Upper Salmonberry Basin	Joe Cockeran	1.5 miles
	Wiley Coyote	0.8 mile
Wheeler Basin	Eye of the Tiger	1.5 miles
	Round Rice	1.1 miles
	Salmon Derby	0.3 mile
	Steel Shield	1.7 miles
Alternate Sales	Blind Faith	1.1 miles
	South Gale	1.8 miles

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 17.3 miles of roads will be improved as designated project work for timber sales in the FY08 sale plan. The activity will be in the following basins:

McGregor Basin	Moose and Squirrel	0.3 mile
Rogers Basin	C-addle	1.8 miles
	U Falls Incline	4.8 miles
Sunday Creek Basin	Sunday Punch	5.2 miles
Wheeler Basin	Eye of the Tiger	1.7 miles
	Steel Shield	3.5 miles

Approximately 6.5 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 10.8 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 FY08 and an additional two (2) miles of property line will be surveyed and marked for sales planned for FY09 and beyond. Five (5) miles of property line marked in prior surveys will be retraced and refreshed, if required, for sales planned for FY08 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.

Young Stand Management

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 FY08. 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 2007 growing season.

Rehabilitation

No units are planned for rehabilitation during this year.

Site Preparation

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

- 1) Slash Burning: Pre harvest evaluation of harvest units indicates that the following units may require some slash burning for site preparation in FY08. On these units slash burning will mostly be restricted to landing piles and a limited number of scattered piles within the units. This 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 assessment will determine the actual necessity to burn.

Basin	Acres	Unit Name – Burn Type
• Larch Mountain	65	Ground Hog A3 – Pile Burn
• McGregor	70	Olson A1 – Pile Burn
• Rogers	50	East Rogers – Pile Burn
	20	Pit Bull A3 – Pile Burn
	<u>205</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 risk of fire escape.

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

Slash piling, or slash manipulation, involves piling or scattering “jackpots” or heavy slash loads to create planting spots and to allow the establishment of the desired number of seedlings. This method is utilized where slash prevents establishment of the desired number of trees per acre and slopes are less than 35%; where it is less costly than other methods, where broadcast burning of slash is unsafe due to poor control boundaries, or 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
• Larch Mountain	65	Ground Hog A3
• McGregor	70	Olson A1
	20	Pit Bull A3
• Rogers	50	East Rogers
	20	Upper Elliot
• Wheeler	20	Doty's Derby
	245	

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 are listed below, but others 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
•		
• Larch Mountain	10	Ground Hog A1 – ground - Phellinus pockets
• McGregor	22	Somonofu – ground - riparian underplant
• Rogers	70	Helibates – ground/aerial? – Phellinus pockets
• Wilark	61	Chazmo A2 – ground - underplant
• Upper Salmonberry	58	Howdy Doty A2 – ground – underplant/Phellinus
	221	

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 FY08. 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
• McGregor	76	Olson A1
	108	Pit Bull A3
	68	Somonofu
• Rogers	79	East Rogers
	75	Seven C's
	<hr/> 407	

- 2) Initial Planting (*Phellinus weirii* treatment areas): There are three 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, and red alder. *Phellinus* treatment increases stand structure and species diversity, reduces the spread of *Phellinus weirii*, and establishes merchantable tree species in understocked areas.

Basin	Acres	Unit Name
• Larch Mountain	68	Ground Hog A3
•	10	Ground Hog A1 – <i>Phellinus</i> pockets in PC
• McGregor	32	Somonofu
	<hr/> 110	

- 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 2007 surveys will be conducted to determine interplanting needs for the 2008 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. Two stands are projected to need this treatment in 2008.

Basin	Acres	Unit Name
• McGregor	22	Somonofu – riparian underplant in hardwood dominated stand
• Wheeler	35	Park Place A5 – underplant for OFS
	57	

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 and Gales Creek. 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, Gales Creek and in any other areas where it is identified. 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.

Plantations will be evaluated during the spring and summer of 2007 to determine treatment needs for FY 2008. Below is a partial list of potential units for FY 2008, however, it will certainly be adjusted when more time appropriate reconnaissance work is accomplished.

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.

1) Manual Cutting

Basin	Acres	Unit Name
• Larch Mountain	86	Hem Hog – alder unit
• Rogers	50	D Deyoe A1 – alder unit
• Wilark	53	Xantippe – alder unit
	<hr/> 189	

2) Aerial Application

Basin	Acres	Unit Name
• Gales Creek	65	North Gale
• Larch Mountain	60	Noble Prize
• McGregor	85	Cherry Lane
• Salmonberry	58	Sappington Creek
• Scoggins Creek	43	Scoggins Combo
• Wheeler	63	Five Peaks
	<hr/> 374	

3) Ground-based Application

Basin	Acres	Unit Name
• Gales Creek	59	Twin Rounder A1, A2
• Scoggins Creek	20	Suma Combo
	<hr/> 79	

Tree Protection

Tree protection involves protecting 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 200 acres across all basins. This includes small pockets of cedar in some 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 2008. Stand exams will determine the greatest need of the units. Approximately 300 acres of the highest priority areas will be chosen for FY2008.

Fertilization

Forest fertilization is done to stands to increase their growth rate and productivity. 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 8-12 years and produce an average of 1000 additional board feet per acre.

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 2017 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 lower 18 feet of tree bole, allowing the development of clear wood.

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 pruned, as well.

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	40	LC East, Firebreak Thin, Storey Burn Road, Quacker State, Two Rivers A1,
• Red Alder – value	70	Beaver Gulch, BLT Deluxe A4, BLT Deluxe A6, Clats Classic
	<hr/> 110	

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 51 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 FY08. (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 FY08 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 and Upgrade Projects (Campgrounds, View Points, Trail Heads, Staging Areas, etc.)

Developed Facility Upgrades

Rogers Camp Trailhead

- Replace single vault CXT with a double vault CXT

Gales Creek Campground

- Expand the trailhead parking area

Browns Camp

- Improve the turning radius on the camp loop road near campsite #7
- Resurface living areas to eliminate pooling and improve site drainage.
- Develop a facility management and upgrade plan for the site that also addresses:
 - Campground expansion

- Picnic area expansion, including the concept of a picnic shelter
- Kids riding area additions
- Facility operations

Stagecoach Horsecamp

- Replace old picnic tables at the 11 campsites
- Upgrade stock water trough

Elk Creek Campground

- Replace the two panel information board with a three panel information board structure

Site and Directional Signing Upgrades For All Facilities

- Replace damaged and vandalized directional signs.
- Fabricate and install additional directional and regulatory signing

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.

Dispersed sites proposed for restoration and improvement

- Little Rubicon Camp

Resource Specialist or Project Cooperators

- South Fork
- Tillamook County Sheriff's 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 FY08 include:

OHV Trails (Rogers Basin)

Construction Projects

- Firebreak One reroute (Rogers Break Timber Sale reroute) Location and design being completed in FY2007.

- Crushers Access Trail (4WD) – Access to the bottom of the Crushers Loops

Non-motorized Trails

Planning Projects

- Complete location and design of a 1.5 to 2 mile segment of challenging (freeride) mountain bike trails in Mountain Bike Area 1. Segment will be selected based on the priorities established in the Trail Management Plan for Mountain Bike Area 1 (Larch Mountain Basin).

Location and Design Projects

- Reehers Camp Trails* (horse, hiker, mountain bike) (Wheeler Basin) – FY08 work will complete location and design work for 2.0 miles of trail.

Construction Projects

- Nels Rogers Trail* (Rogers Basin). Replacement of an old 20 foot dimensioned lumber trailbridge.
- Reehers Camp Trails* (horse, hiker, mountain bike) (Wheeler Basin) – The Reehers Camp Trails project is being located and constructed in segments and phases. FY08 work will construct 1 (one) mile of trail that was located and designed in FY07.
- Wilson River Trail segment C (horse, hiker, mountain bike) (Larch Mountain Basin). FY08 work will include construction of a 3.5 mile section of Wilson River Trail segment C.

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 FY08 trail upgrade plans will be developed for the following OHV trails in the Rogers Basin

- Back to Back Trail (MC, quad, and part 4WD)
- Marianna Trench Trail (MC)

In FY08 contract trail upgrade work, including grading, drainage, surface hardening and new trail segment construction will occur on the following trails:

- Crooked Bridge Trail 1.0 mi.
- Julie's Trail 1.7 mi.

In FY08 ODF Equipment Operators and Volunteers will complete trail upgrade work, including grading, drainage, surface hardening and new trail segment construction on the following trails:

- University Firepower Trail 1.2 mi
- Island Trail 1.1 mi
- Gummy Worm Trail 1.0 mi
- Black Water 50 1.0 mi
- Firebreak Five 1.0 mi
- 7-Up 0.5 mi
- Elmers Trail 1.0 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 51 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 assessment and basic maintenance work planned for FY2008.

PROJECT WORK	QUANTITY	COMMENTS
Trail Condition Assessments	- 51 miles of non-motorized trail - 58 miles of OHV trail	Non-motorized trail assessments completed every 6 months. 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 | OHV Trail Equipment Volunteer Operator |
| 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 OHV Trail Equipment 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 FY2008.

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 2008 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 FY08.

Stand Level Inventory and Other Vegetation Inventories

Stand Level Inventory (SLI) will be completed on approximately 17 stands in the Forest Grove District during FY08. The total acreage of these stands is approximately 1,940 acres (2% of the district). FY09 proposed timber sale areas will be a top priority, and this work will be completed under the statewide SLI contract. SLI has already been completed for all FY08 sales. Currently, 71% of the district has 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 FY08 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 15 sales in the FY08 sale plan (including alternate 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 2006 for 11 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 2007. Two of the 13 sales that were identified as potentially suitable habitat were surveyed in 2005 and 2006. A third-year survey will be conducted for these sales in 2007. Spotted owl surveys are not required for 2 of the 15 sales in the FY08 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 FY08 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 FY08, in order to determine site occupancy and the pair, nesting, and reproductive status of resident owls.

Marbled Murrelet Surveys

For FY08 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 January, 2005 ODF Policy Guidance: *Marbled Murrelet Operational Policies* and the associated procedures and guidance documents. The survey methodology and standards utilized by ODF are based on the protocol developed by the Pacific Seabird Group (2003 revision).

Four of the 15 sales in the FY08 sale plan (including alternate 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 2006 for the four sales that were identified as potentially suitable marbled murrelet habitat. The second year of survey will be completed for these sales in 2007. Marbled murrelet surveys are not required for 11 of the 15 sales in the FY08 sale plan, due to the absence of potentially suitable habitat within or adjacent to the sale areas. The District T&E Coordinator and 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 FY08 sales are summarized in the table below. The presence of marbled murrelets has never been detected on the Forest Grove District during the past 13 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
Blind Faith**	NSO	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
C-addle	MM	<ul style="list-style-type: none"> 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). The first year of murrelet surveys were conducted in 2006, and the second year of survey will be completed in 2007.
Cougar Ridge	NSO	The first year of survey was conducted in 2005, the second year of survey was conducted in 2006, and the third year of survey will be completed in 2007.
Eye of the Tiger	NSO/MM	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
Joe Cockeran	NSO	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
Moose and Squirrel	NSO	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
Nine to Five	NSO	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
Round Rice	NSO	The first year of survey was conducted in 2005, the second year of survey was conducted in 2006, and the third year of survey will be completed in 2007.
Salmon Derby	NSO	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
South Gale**	NSO	The first year of survey was conducted in 2005, the second year of survey was conducted in 2006, and the third year of survey will be completed in 2007.
Steel Shield	NSO/MM	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
Sunday Punch	---	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).
U. Falls Incline	NSO	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
Wildcat Stevens	NSO/MM	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.
Wiley Coyote	NSO	The first year of survey was conducted in 2006, and the second year of survey will be completed in 2007.

* 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 FY08 sale plan were reviewed to identify potential conflicts with listed plant species. The sales in the FY08 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 nine FY08 sales: C-addle, Eye of the Tiger, Joe Cockeran, Nine to Five, Round Rice, Salmon Derby, Steel Shield, Sunday Punch, and Wildcat Stevens.

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 for the Wilson River Basin was initiated in FY07 and will continue into the fall of FY 08. Separate data gathering projects (including Road Inventory Management System [RIMS] work, ODFW aquatic habitat surveys, and slope stability and geomorphology terrain modeling) were 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 fall of 2007.

Research and Monitoring

The Forest Grove District will assist in a variety of research and monitoring projects in FY08. 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.

Other Planning Operations

Other planning activities will include completion of comprehensive trail 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 FY08 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

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 **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.
- ◆ 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, 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, 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.

APPENDICES

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