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# NORTH CASCADE DISTRICT

## 2007 ANNUAL OPERATIONS PLAN

### INTRODUCTION

This operations plan describes the activities planned for the Santiam State Forest during the 2007 fiscal year. The 2007 fiscal year runs from July 1, 2006 to June 30, 2007. This plan summarizes the activities and projects that will take place in FY 2007 to achieve the goals, strategies and objectives of the Northwest Oregon State Forest Management Plan, Cascade District Implementation Plan and the Santiam State Forest Recreation Management Plan as well as state and federal statutes and regulations, policies and voluntary measures.

The 2007 Annual Operations Plan is broken out into a Summary section that discusses commercial forest management operations, roads and engineering, non-commercial forest management operations, recreation, land exchange, planning, public information and education, and administration; Summary Tables, Pre-Operations Reports, Maps and a Public Involvement appendix that will be included in the final document.

A portion of this plan describes timber harvests and associated road work which will be designed and prepared for contract during FY 2007. The actual harvesting and associated road work described in these plans will not occur until one to three years after the end of FY 2007 due to the time required to set up the timber sales, write the timber sale contracts, advertise and auction the sales. The duration of a timber sale contract is generally two to three years.

The reforestation, young stand management, recreation management, road management, planning and information activities described within this plan are estimated objectives that will be met within FY 2007. The levels of these activities are based on current information and data. These management activity levels may be adjusted as new information becomes available during the fiscal year. For instance, initial tree planting levels are dependent upon harvest units being completed on a certain timeline. If those harvest units are not completed as estimated, the initial tree planting levels would be adjusted.

Acres in this plan are described as gross acres or net acres. Gross acres refer to the total area within the boundaries of an operational unit. Gross acres are the starting point for determining acreage. Acres reported in ArcView shapefiles for a unit are gross

acres. Net acres refer to the total area within the boundary of an operational unit minus the acres in roads, stream buffers, green tree retention areas and other areas that will not be harvested. Net acres are used when determining harvest volumes.

Harvest Levels: In accordance with the guidance on the 2007 harvest levels<sup>1</sup>, the district has included 13.97 MMBF of timber harvest in this Annual Operations Plan (Table A-1). This harvest level is consistent with the district's intensive review<sup>2</sup> 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.

Table 1. Annual Operations Plan objectives compared to annual objectives identified in the 2003 Cascade District Implementation Plan (Table A-1). All values are acres.

Silvicultural Activity	IP Annual Objective		2007 AOP Objective
	Low	High	
Conifer Partial Cut	800	1200	723
Conifer Clearcut	180	270	270
Hardwood Partial Cut	0	0	0
Hardwood Clearcut	0	0	0
Rehabilitation	0	0	0
Reforestation (Initial Planting)	115	345	389
Precommercial Thinning	150	250	250
Fertilization	1000	1400	1100
Pruning	0	50	149

## INTEGRATED FOREST MANAGEMENT OPERATIONS

### Timber Harvest Operations

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

Definitions for proposed harvest types can be found on the "State Forest Annual Operations Planning" web page ([http://www.odf.state.or.us/DIVISIONS/management/state\\_forests/aop.asp](http://www.odf.state.or.us/DIVISIONS/management/state_forests/aop.asp))

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<sup>1</sup> Establishing harvest levels in FY07 on State Forests covered by the NW and SW Oregon State Forest Management Plan  
<sup>2</sup> Model Solution Review Report of the 'Forest Management Plan with Habitat Conservation Plan' Alternative

The FY 2007 timber harvest operations are in accordance with the objectives of the 2003 Cascade District Implementation Plan. Summary tables and detailed pre-operation reports for the harvest operations are attached to this document.

Approximately 73% of the planned harvest operations are partial cuts while the remaining 27% are regeneration harvests. Of the partial harvests 15% are heavy, 76% are moderate and 7% are light partial cuts. The planned operations occur in stands that range from 40 to 85 years old. Approximately 12% of the partial harvests are planned in stands that are 85 years and this is in an alternate sale. These partial cuts are intended to reduce the overstory density and to maintain or further encourage the understory growth within these stands. Partial cutting will also allow the residual trees within a stand to increase their diameter growth. These proposed partial cuts will allow the stands to move along the trajectory towards their desired future condition.

All of the regeneration harvests will take place in stands that are not on a trajectory for complex stand structures. All of the regeneration harvests are modified clearcuts. The regeneration harvests will be reforested after harvest with either one or a mixture of the following tree species: Douglas-fir, western hemlock, western red cedar, noble fir and red alder. In some stands this will add to the species diversity.

The partial harvests and regeneration harvests proposed in this operations plan comprise 2% of the total acres within the Santiam State Forest.

The guidelines for managing structural habitat components listed under Landscape Management Strategy 3 in the *NWO State Forests Management Plan* (pg. 4-52) will be followed for the FY 2007 Annual Operations Plan. In proposed commercial forest management operations, existing down wood and snags will be retained. The management goal is to have an average of two snags per acre retained within an operation at the completion of harvest activities. Residual live trees retained in conjunction with regeneration harvests will serve as a source of future snags and down wood and provide legacy trees for the new stand being regenerated. The snags and down wood left in all operations also support future forest needs. The snags provide habitat for cavity-using species and provide a future source of down wood. The down wood provides habitat for wildlife species and enables other key functions such as nutrient cycling.

Additional information on the proposed operations can be found in Tables 1, A-1, and A-2 located in Appendix A and in the individual pre-operations reports located in Appendix B.

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 in acres.

<b>Stand Structure</b>	<b>REG</b>	<b>CSC</b>	<b>UDS</b>	<b>LYR</b>	<b>OFS</b>	<b>GEN<sup>1</sup></b>
<b>Current</b>	<b>0</b>	<b>41</b>	<b>952</b>	<b>0</b>	<b>0</b>	
<b>Post Harvest<sup>2</sup></b>	<b>270</b>	<b>41</b>	<b>682</b>	<b>0</b>	<b>0</b>	
<b>Desired Future</b>				<b>598</b>	<b>0</b>	<b>373</b>

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.

Management activities within riparian areas of streams will focus on achieving properly functioning aquatic and riparian habitat conditions over time. Riparian Management Areas (RMAs) will be established immediately adjacent to streams for the purpose of protecting aquatic and riparian resources and maintaining the functions and ecological processes of the streams. The Management Standards for Aquatic and Riparian Areas found in the *NWO State Forests Management Plan* (pg. J-1 – J-16) will be followed within these RMAs.

The District follows the *Oregon Forest Practices Act* statutes and rules for soil and water protection. These rules define the best management practices for protecting soil, air and water quality when conducting timber harvests, prescribed burning or road construction activities. The District uses the professional expertise of foresters and forest engineers to evaluate proposed activities. The District also uses geotechnical expertise in planning and carrying out management activities, especially when steep slopes and other high landslide hazard locations require this.

All management activities will avoid take of Northern Spotted Owls by applying *Procedures Leading to Endangered Species Act Compliance for the Northern Spotted Owl (USFWS 1990)*, subsequently rescinded. These measures remain the best available information for avoiding take. These guidelines call for surveys of suitable habitat, protection of core areas, and maintaining suitable habitat within owl circles. South Rock Creek and the South Rock Railroad alternate are located within Northern Spotted Owl sites. Biological assessments of the Northern Spotted Owl sites have been prepared by ODF staff biologists. These assessments will be reviewed by both the Oregon Department of Fish and Wildlife and the US Department of Fish and Wildlife. The biological assessments and comments from both agencies will be reviewed by the District Forester, Area Director and Program Director who will then determine how to proceed with the planned operations.

## Summary of Operations by Basin

Table 3. Summary of Timber Harvest Operations in each basin. All values are in acres.

Basin	2007 AOP		Cumulative Operations <sup>1</sup> (FY 02—07)	
	Partial Cut	Clearcut	Partial Cut	Clearcut
Butte Creek	0	115	964	203
Cedar Creek	0	0	1176	141
Crabtree	0	0	0	255
Green	0	0	430	3
Mad Creek	0	0	950	119
Rock Creek	504	0	1505	328
Scattered	219	155	705	370

1. The 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.

The following is a short description of operations proposed within the seven management basins within the District. A more detailed description of each operation can be found in the attached Pre-Operations Reports.

### **Butte Creek Basin**

The following operations will change the current stand conditions of 115 acres of under storey development to regeneration.

South Gawley: this is a 115 acre modified clearcut. The 50 to 60 year old stands that make up this operation are currently classified as Understory. This operation was originally proposed in the FY 2005 AOP. It has been modified slightly from the original version and is included in this FY 2007 AOP.

### **Cedar Creek Basin**

There are no planned harvest operations within this basin for FY 2007.

### **Crabtree Basin**

There are no planned harvest operations within this basin for FY 2007.

### **Green Basin**

There are no planned harvest operations within this basin for FY 2007.

## **Mad Creek Basin**

There are no planned harvest operations within this basin for FY 2007.

## **Rock Creek Basin**

Camp 26 Thin: this is a 198 acre partial harvest in a 60 year old stand. The stand within the operation is currently classified as Understory. This operation was included in the FY 2004 AOP as an alternate sale and was not utilized. A modified version is now included as an operation in the FY 2007 AOP.

South Rock Creek: This is a 306 acre partial harvest broken into three operation areas. The 70 year old stands within the operation are currently classified as Understory for Areas I and II and Closed Single Canopy for Area III.

Special Concerns: Part of this operation is located within a Northern Spotted Owl site. A biological assessment has been prepared by an ODF biologist.

South Rock Railroad (Alternate): this is an 85 acre modified clearcut proposed as an alternate for this sale plan. The 70 year old stand within the operation is currently classified as Closed Single Canopy.

Special Concerns: Part of this operation is located within a Northern Spotted Owl site. A biological assessment has been prepared by an ODF biologist.

## **Scattered Basin**

The following operations will change the current stand conditions of 155 acres of understorey development to regeneration.

Gates Hill: there are 155 acres of modified clearcut and 84 acres of partial harvest within this operation. The operation is broken out into 4 sale areas. The 40 to 70 year old stands within the operation are currently classified as Understory.

Shellburg Creek Loop: this is a 135 acre partial harvest broken out into two areas. The 40 to 85 year old stands are currently classified as Understory.

Special Concerns: Two hiking trails are located within the proposed operation. A campground is located adjacent to the operation. The trails will be closed while the operation is active and re-opened within a year after the harvest is completed. Log trucks will not be allowed on the road where the campsites are located.

## Forest Roads Management

### **Overview**

The primary transportation focus is to protect and secure access for forest management activities. Other resource management and other users are also considered. The transportation system provides access for timber removal, recreation, fire control and removal of other forest products to name a few of the uses. The District transportation system is managed to provide efficient and effective access that facilitates obtaining the greatest permanent value from the forest for the people of Oregon. This AOP represents Level III planning as described in the Forest Roads Manual, pg. 2-2.

An important component of the transportation activities planned in FY 2007 will be to maintain and improve current access to a condition that minimizes resource impacts to water quality and meets ODF's access needs. A high priority and special concern for road improvement is to protect or improve water quality. The activities below will accomplish this as well as meet the transportation goals. The District Implementation Plan defines our goals for surfacing. Higher use mainline roads and some collector roads are targeted to have a 2 to 3 inch minimum lift of crushed rock surfacing. This includes re-surfacing of roads to replace worn running surfaces and/or to upgrade pit-run roads by adding a more serviceable crushed rock running surface. Roads with crushed rock make it possible to create and maintain a road surface shape that will drain well and allow for efficient travel. Good surface drainage is critical to minimizing sedimentation from roads and for protecting the subgrade to allow winter hauling where appropriate. Along with good surface drainage, once the water is off the road and into a ditch it needs to be directed in a way to minimize impacts to water quality. Cross drainage will be reviewed on essential haul routes, tributary roads and will be upgraded where necessary, including disconnecting the ditches from live streams. The guidelines found in the ODF Roads Manual are followed to decide where additional culverts will be installed. Stream crossings will be analyzed on haul routes and the connecting spur roads to make sure they meet 50-year flow event minimums. Roadside brushing and roadside spraying will be conducted to control encroaching vegetation.

Several new roads will be constructed to provide access for commercial forest management operations planned within the 2007 fiscal year. All new road construction for this Annual Operations Plan falls into the spur road category and will be evaluated during sale prep for closure or vacation after the sale is completed. Spur roads needed for future management activities but not for immediate use may be put in a restricted status by partially vacating or simply closing the road. This will help to reduce the maintenance cost as well as water quality impacts from those roads. All new road construction will be designed, reviewed and administered by qualified forest engineers. Roads will be rocked if winter use is anticipated, typically during cable logging operations. Roads within some of the predominately ground harvestable operations will be restricted to summer use only and those roads will generally not be surfaced. There are exceptions

when it may be desirable to rock roads primarily for reforestation access that must occur in the winter.

The transportation activities for the 2007 fiscal year will fall within fiscal year budget instructions. The high cost activities will be bridge construction and rock-crushing projects to improve or maintain higher use roads. These projects are achievable with the proposed sales for this plan and stay within current guidelines for project expenses.

Small quantities of noxious weeds such as Tansy ragwort, Scotch broom, and a variety of thistles are present around the District. If significant populations of noxious weeds are determined to be present in the future on the District, a formal plan will be created and implemented to address their control.

Additional information regarding roads and engineering can be found in Table A-3 located in Appendix A.

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

	Mainline (High Use)		Collector (Medium Use)		Spur (Low Use)	
	AOP	IP <sup>1</sup>	AOP	IP <sup>1</sup>	AOP	IP <sup>1</sup>
<b>Road Construction</b>	0	0 - 0.4	0	0.2 - 0.3	6.19	4 - 5.2
<b>Road Improvement</b>	0	1.6 - 15	2.66	4.9 - 6.1	1.17	2.4 - 3.6
<b>Road Closure/Vacation</b>	0	0 - 0.5	0	0 - 0.5	3.53	4.6 - 5.8
<b>Road Maintenance – District<sup>2</sup></b>	60		30		20	
<b>Road Maintenance - Active Operations<sup>3</sup></b>	19.4	n/a	14.2	n/a	10.81	

1. These are annual estimates derived from Table 6 Potential Road Activities FY 2001-2011 of the 2003 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.

## Road Construction

All of the road construction described for the planned commercial forest management operations described within this Annual Operations Plan will be designed as a spur road. These will be short roads, generally less than ½ mile in length and will be built to standards to minimize the road footprint. Road subgrade widths will be 14 to 16 feet wide and either ditched or out-sloped. Since many of the proposed operations are partial harvests, there will be a need to use most of the roads again for future management

activities. Some of the roads built will be closed (not vacated) when the operation has been completed. Closed roads will be put in a condition that will require minimal or no maintenance until needed again. This may involve grass seeding and the installation of water bars, tank traps or other road barriers to keep vehicles off the road. Spur roads into completed clear-cut operations will be vacated when it is determined that the road is no longer needed for approximately 15 years or more. Stream crossing structures will be removed to eliminate the possibility of a stream restriction or maintenance problem. In some cases the access in clear cuts will not be vacated to assist with the reforestation effort. The net effect of road building and road vacating will be a gain of 2.66 miles of spur road on the District.

### **Road Improvement**

Approximately 2.6 miles of collector road will be resurfaced with crushed rock. The roads scheduled for resurfacing have been determined to need additional surfacing for several reasons. Most often the road has been judged to be unsuitable or undesirable for wet weather use. In some cases the base rock is close to being exposed or anticipated use of the next timber sale warrants additional surfacing. The primary goals for resurfacing are to improve surface drainage of the road, provide a smooth running surface and provide enough surfacing rock for future maintenance gradings. Approximately 1.7 miles of spur road will be improved by re-opening and spreading pit run surfacing.

The North Block of the Santiam State Forest will have a roadside spray project consisting of approximately 20 miles of road.

### **Road Access Management**

Generally speaking all Oregon Department of Forestry roads are open to the public without restriction. Roads that are not needed for future forest management or for extended periods of time (more than 15 years) are candidates for some form of closure to take the road out of active use. Roads that pose a high risk of damage to water quality are candidates for closure. Closing and vacating roads saves on the District's maintenance cost and helps to minimize impacts to the environment from roads. Not only do these roads cause a maintenance liability; some of these roads become opportunities or locations for dumping of trash. Many of the short spurs constructed for timber sale use will be reviewed for closure. Before any road is scheduled for closure a "Road Proposed for Vacating " sheet is routed to all known interested management sections within the District to make sure roads are not closed that are needed.

### **Road Maintenance**

The road maintenance for roads being used for timber sale access becomes the responsibility of the timber sale purchaser once sale activity has begun. Timber sale

purchasers during this operating plan will maintain approximately 44.4 miles of road. This primarily involves grading roads due to purchaser's use and maintaining drainage systems. Road grading, ditch cleaning, culvert inlet and outlet cleaning and spreading patch rock as needed during timber haul will all be done by purchasers.

The District roads not under timber sale contracts are maintained by the District Equipment Operator using a grader, loader, lowboy and a dump truck. Road grading over the entire District is covered at least once during the year with some roads graded twice. Small rocking projects will also take place to reinforce weak subgrades or cover road surfaces producing sediment. The District road crew also responds to emergencies such as unplugging culverts, removing small slides, clearing slough from ditch lines and blocking roads when necessary. A backhoe or excavator will be rented for approximately a 1/2 month to clean out culvert catch basins over most of the District as well as any miscellaneous projects that come up.

By combining the timber sale road activities and District road crew activities together the following road maintenance work estimates are expected:

- 155 miles of road will be graded
- 2.5 miles of road will be resurfaced with crushed rock
- 3,900 cubic yards of crushed rock will be spread on roads
- 1,000 cubic yards of crushed rock will go into stockpiles
- 9 miles of road will be brushed
- 20 miles of road side will be sprayed
- 30 miles of culvert catch basins will be cleaned
- 2 road blowouts/blockages will be repaired on SRC mainline
- additional cross drains will be installed
- Slough and slide removal will take place as needed
- Road surface patching will be done as needed

## **Land Surveying**

Approximately 3.75 miles of property line will be posted and blazed using contract crews and District personnel for this sale plan.

## Young Stand Management

Young stand management operations occur in forest stands between the ages of 0 to 20 years. These operations tend not to produce revenue, but are essential in establishing a healthy forest. The objectives of young stand management are to achieve the goals for reforestation, stand structure development, and future revenue generation. The current

fiscal year budget allocates the necessary funding to implement stand management prescriptions to move stands toward the desired future conditions for each stand.

Several smaller and short-term reforestation projects are well suited to using inmate crews from Marion County or South Fork, a correctional facility that is a cooperative effort between the Department of Corrections and ODF. These reforestation projects tend to be one-day projects such as planting one to two acres or pruning small acres of white pine to protect them from blister rust. The inmate crews work well in filling the niche left open when projects are too small to contract out. Prior planning is needed to schedule any inmate crew for these projects; although some emergency situations can be accommodated.

Planned operations necessary to meet landscape and stand structure targets include site preparation, planting, vegetation management, tree protection, pre-commercial thinning and fertilization. The following is a brief summary of each individual activity. Additional information on young stand management can be found in Tables 1 and A-4.

## **Rehabilitation**

No rehabilitation projects are planned for fiscal year 2007.

## **Site Preparation**

Site preparation is an important tool used in establishing a stand. Site preparation can effect seedling establishment and survival. Site preparation will help with reforestation efforts to move a stand into a Regeneration (REG) classification. Prescribed fire (burning of logging slash), mechanical (piling of slash) and use of herbicides are just a few tools used in site preparation. The goal of burning or piling logging slash is to eliminate or manipulate logging debris in order to create plantable areas. Herbicide site preparation is used to manage undesirable vegetation that would compete with newly planted seedlings. Planting spot development is used when burning is not a preferred method due to shallow soils or flat slopes. All site preparation activities contribute to moving a stand towards its desired future condition.

### **Basins:**

#### **Butte Creek**

- Chemical- 73 acres
- Slash burning- 73 acres

#### **Cedar Creek**

- Chemical- 15 acres
- Planting Spots- 73 acres
- Slash burning – 510 acres

- Underburn – 87 acres

#### Rock Creek

- Chemical – 96 acres
- Broadcast burning – 83 acres
- Slash burning – 187 acres

#### Scattered

- Chemical - 89 acres
- Broadcast burn – 126 acres
- Slash burning – 126 acres

Special Concerns: To protect air quality, all burning will be done in accordance with the Oregon Smoke Management Plan. The Smoke Management Plan is designed to reduce emissions from prescribed burning in western Oregon and to minimize smoke intrusions into designated population areas.

When using herbicides on State Forests for site preparation needs, EPA approved herbicide product labels and the Forest Practices Act will be strictly adhered to. Mechanical site preparation will also be monitored during use to ensure that the Forest Practices Act requirements are met.

## **Planting**

Reforestation is the establishment of seedlings following regeneration harvests, patch cuts, root disease removal, severe blow down events, and, in certain cases, partial harvests. Planting helps meet the goals of reforestation through planting a variety of tree species in stands. The mixing of tree species helps achieve the desired future conditions within each management basin. The various activities of initial planting, interplanting, and underplanting provide different outcomes to achieve these future conditions.

Initial planting activities establish the seedlings needed to begin a regeneration stand. The species of seedlings planted and the density at which they are planted will influence future management activities within the stand.

Interplanting is used when initial reforestation has been less successful than desired. Planting additional trees within an area will continue the stand along its desired management path.

Underplanting involves planting seedlings beneath a canopy of taller trees. Most species used in underplanting are shade tolerant and are used to help achieve a desirable understory needed for Layered or Older Forest Structure stands. This activity can likewise introduce a desired native species into a stand to increase stand diversity.

**Basins:**

Butte Creek

- Initial Plant – 73 acres
- Inter-planting – 50 acres

Cedar Creek

- Initial Planting – 15 acres
- Underplanting – 262 acres

Rock Creek

- Initial Planting – 179 acres

Scattered

- Initial Planting – 122 acres
- Inter-planting – 50 acres

**Vegetation Management**

Vegetation management activities include the use of aerial, backpack and hand applications of herbicides to control brush, and the removal of brush using chainsaws, mechanized equipment or hand tools. The various tools used control the growth of unwanted vegetation within stands classified as Regeneration. However, the same tools are used in stands of other classifications. The objective of vegetation management is to favor the survival and development of desired species or to remove invasive plant species.

**All Basins:**

200 acres- The units will be identified at a later date

**Tree Protection**

Tree protection is used in areas where animal damage is expected to reduce the number of seedlings below desired levels. An initial means of protection is placing a vexar tube over a newly planted seedling and supporting the tube with a pin. Vexar tubes are generally reserved for tree species ravaged by browsing animals.

**Basins:**

Cedar Creek - 49 acres

Rock Creek – 96 acres

Scattered – 33 acres

## **Precommercial Thinning (density management)**

Due to successful reforestation efforts and to an influx of natural seedlings, forested stands can become crowded. Tree removal is needed to reduce the crowding. A pre-commercial thinning project removes some of the weaker, slower growing trees making room for the stronger, larger trees to grow. Species selections are based upon the desired future condition for each particular stand. The timing of the pre-commercial thinning and the residual number of trees to remain are influenced by the desired future condition as well. The trees in these stands have not reached commercial size. Those trees cut are left within the unit to decay and provide future nutrient needs.

### **Basins:**

Mad Creek – 100 acres

Rock Creek – 150 acres

Special Concerns: Leaving the cut trees within the stand creates a potential fire hazard. The slash from the cut trees decomposes quickly so that the hazard is short term, usually less than five years.

## **Fertilization**

Sustainable tree growth can only happen when trees have enough sunlight, water and available nutrients. When one of these three components is missing, the growth of the tree slows or stops altogether. Since the amount of sunlight and water on a particular site are not easily controlled, not much can be done to ensure their availability. Nutrients, on the other hand, can be controlled through the broadcast aerial application of fertilizer. This is the quickest, most efficient, and accurate method to use in dispersing fertilizers on forestlands.

### **Basins:**

Rock Creek - 1,100 acres

Special Concerns: The aerial application of fertilizer is carefully monitored to ensure the fertilizer is placed where it was intended to go. Buffers are applied to streams where no fertilizer application will take place and are strictly adhered. All stands are examined to determine if portions of a stand need to be removed from the fertilization project since not all species respond to the addition of nitrogen. Red alder, as an example, produces nitrogen through nodules on the roots and has no need for additional nitrogen. Therefore, alder stands would be removed from a fertilization project.

## **Pruning**

White pine trees need to be pruned to help prevent the trees from being infected by white pine blister rust. All of the white pine units are on the second rotation for pruning and will be pruned to a height between 2-6 feet. Pruning of the white pine will continue until a height of at least 8 feet is achieved.

Some trees in the unit have the white pine blister rust in them. These trees will be severed at ground level to limit the spread of the blister rust.

The units are small in acres and would be expensive to put under a service contract. Therefore, inmate crews will prune the pine stands.

### **Basins:**

Butte Creek – 76 acres

Crabtree - 22 acres

Mad Creek – 49 acres

Scattered – 2 acres

## **Recreation Management**

### **Overview of Recreation Management**

The Recreation Program on the Santiam State Forest is managed with the guidance of the Recreation Management Plan approved in September 2000, Cascade Implementation Plan approved in March 2003 and the approved Northwest Oregon State Forest Management Plan. This section of the FY07 AOP is designed to provide information about the types of recreation opportunities and activities that are currently in demand on the Santiam State Forest, the current developments and opportunities available on the forest, and the planned projects for the FY07 AOP period. The planned projects will increase the recreation capacity of the District. Funding for the planned projects will be from the 2007 fiscal budget. The District will also find and apply for state and federal grants that will compliment the program.

Currently, the recreation staff consists of a permanent fulltime Recreation Coordinator, Natural Resource Specialist (NRS1), an intermittent temporary or volunteer Forest Management Technician, a student Summer Intern/ trainee and a Forest Unit Supervisor 2 who also supervises the Forest Engineer/Engineering Unit.

A Citizen Advisory Committee is utilized as a source to stay connected to a wide range of recreational interests and the public. The Committee convenes once a year to review accomplishments and to discuss and suggest future projects and activities. The Committee is also a source for recruiting volunteers for the District. The District initiated the formation of an intergovernmental committee to open an avenue of coordination and

communication among the various recreational staffs of county governments and state and federal agencies. The committee adopted the name of "Mid-Willamette and Cascade Recreation Coordination Group". The members of this committee hope to use this group as a forum to coordinate recreation needs, opportunities and development as well as to avoid unnecessary or conflicting uses and duplication of efforts.

Volunteers are expected to contribute labor and expertise to the recreation program. Volunteers from clubs will be used to construct trails and facilities. These clubs include the Oregon Equestrian Trail club (OET), Back Country Horsemen club, Chemeketans Hiking club, Merry Cranksters and Mountain Street Dirt Crew (MSDC) which are both mountain bike clubs.

In the past year volunteers have donated over 1000 hours of time as well as expertise and resources to aid in the development of campgrounds and trails on the district. Partnership with the Silver Falls Chapter of the Oregon Equestrian Trails club (OET) has been important in the development of equestrian and other non-motorized trails and facilities

Most recently the recreation staff has formed a partnership with the Mountain Street Dirt Crew (MSDC) free-ride mountain biking club. MSDC is working with the recreation staff to create new mountain biking opportunities near the Shellburg Falls Recreation area.

The recreation staff will also utilize 10-person inmate crews from the Oregon Department of Corrections (DOC), Santiam Correctional Institution, Mill Creek Correctional Facility and also Marion County Inmate Work crews. These inmate crews will be used for facility and trail maintenance, improvements, and construction projects. The crews are within 1 to 1 ½ hour travel time from most recreation sites. The crews have the expertise and ability to perform the kind of specialized work projects that need to be completed. Finally, when there are complex or difficult projects that require more expertise than is available from the above crews the Department of Forestry's South Fork Inmate Crews can be utilized. However the long travel distance each way limits the work that South Fork Crews can accomplish each day.

The primary recreational activities on the Santiam State Forest include hiking, equestrian use, biking, OHV use, hunting, camping, fishing and sight seeing. A variety of organizations occasionally request to use an area of the forest for 2 to 3 days for reenactment of historical events and youth leadership camps in which a forest setting is needed. In the past these have included reenactments of Civil War and World War II battles, mountain bike races, youth leadership camps, bow hunting skill competition and back-county road motorcycle events.

The recreational facilities and opportunities on the Santiam State Forest consist of four developed campgrounds and dispersed camping areas, one developed specialized campground for Equestrian enthusiasts, two unique vistas and natural attractions.

Combined, there are currently 23 camp sites on the Forest. There are about 12.5 miles of non-motorized trails associated with the developed sites. The attractions or special places on the Santiam State Forest are located at or near developed sites. These include three waterfalls, Shellburg Falls and Upper and Lower Butte Falls, two lakes, Rhody and Butte, commonly called the High Lakes, as well as Rocky Top and the Natural Rock Arch.

One area of the Forest is used by ATV and 4 x 4 enthusiasts. The State Forest land adjacent to Crooked Finger Road area east of Scott Mills has been used by local off-road motorists for a number of years. Since 2001, recreation staff has tried to regulate and control this use to a specific area. The Recreation Coordinator has begun to establish a relationship with a loosely organized group of ATV recreationists from Silverton, Oregon. The recreation staff plans to continue to work with these forest users to develop a more interesting short trail system for off-road activities that can be managed.

Since the Santiam State Forest Recreation Plan was approved there has been a steady annual increase of recreation use by the public on the Forest. The two most visited areas are the two Butte Creek Falls and the High Lakes area. These sites are well-known locally. They are used primarily for day-use, but the campsites at Rhody Lake are used occasionally throughout the summer. Illegal campfires and vandalism have been a problem in the past and continues to be a concern. Currently campfires have not been allowed during fire season to minimize the risk of an uncontrolled fire. The third most visited location is the Shellburg Falls area. It has the potential to become the most heavily used because of the hiking trail connecting to Silver Falls State Park, as well as the publicity about Shellburg Falls and the exposure the site receives through the Forest Education and Interpretation Programs. Campfires are allowed throughout the year at the campsites at Shellburg. The Rocky Top and Natural Rock Arch trails and vistas are used frequently by those who want more solitude on their hike.

The dispersed camp sites at Rock Creek were available to be used for the first time during the 2005 camping season. The four sites were used frequently throughout the summer. The horse camp, located adjacent to the Monument Peak Road, will be available for camping for the first time during the 2007 fiscal year. It is anticipated that this campground and the amenities it offers will become a popular destination and base camp for weekend trail riders.

All of the developed sites and other frequently used areas are patrolled by two certified Law Enforcement Officers hired through an agreement with the Oregon State Police. These retired State Troopers promote public awareness of rules and regulations and assist with providing a safe recreational experience for recreationists. They investigate crimes and violations on the Forest and cite individuals to court when the responsible party is identified. An on-going effort of the officers is to identify and contact individuals that illegally dump debris and garbage on the Forest. When responsible parties are identified they are usually cited to Justice Court and required to clean-up the trash. Since

the District began using these officers there has been a significant improvement in compliance with the regulations in effect on the Forest.

The Recreation Coordinator, temporary employees and the Recreation Summer Intern regularly patrol all the developed sites from May through October. The primary objectives of this effort is to monitor and document the amount of use the sites are getting and, as important, to make contact with recreationists to inquire if the facilities and opportunities provided are ones that they like to visit and if there are additional services and opportunities they would like offered on the Santiam State Forest.

### **Facilities (Campgrounds, View Points, Trail Heads, etc.)**

#### **Shellburg Falls Recreation Area:**

The Shellburg Falls Recreation Area offers a variety of nonmotorized recreational activities in a secluded high quality yet minimally developed setting. Within the Shellburg Falls Recreation Area there are 3.5 miles of trail, a campground with four sites and two trailhead parking areas. In addition the Shellburg Falls Recreation Area is a popular interpretive and educational destination for schools and the general public. ODF staff offer multiple guided nature hikes and school field trips at this site.

North Cascade District's goal at Shellburg Falls is to maintain a secluded, more primitive setting while offering a quality camping and trail use experience while enhancing the educational potential of this site.

**Trails:** The future emphasis of trail development at Shellburg Falls is to offer a system of nonmotorized loop trails. These loops will be of varying lengths and difficulty to offer visitors to Shellburg Falls a variety of trail options. Short trails that are easy in difficulty are designed for interpretive/educational programs and the casual trail user. Longer more difficult trails are designed for trail users who wish a more challenging experience. During FY 07, ODF will design and construct a half mile of hiking/interpretive trail and a half mile of nonmotorized trail to complete two loop trails in the Shellburg Falls Recreation Area. The first half mile trail will create a loop out of the Shellburg Falls Hiking Trail. The second half mile trail section will create a loop out of the Shellburg Creek Trail and connect the campsites in the Shellburg Campground allowing campers a convenient link to the entire Shellburg Falls Recreation Area trail system.

**Interpretive Area:** The number of educational and interpretive programs at Shellburg Falls is increasing yearly. During these programs interpretive staff commonly holds outdoor lessons in the forest. During the winter months there is a need for a covered shelter to present these formal programs. ODF will design and construct a small natural log shelter with benches to act as an outdoor classroom for students and as a picnic shelter for visitors to Shellburg Falls.

#### **Shellburg Area Free Ride Mountain Biking Trails:**

Free ride mountain biking is a relatively new yet fast growing recreational activity. This activity is comprised of down hill mountain bike trails with technical trail features such as bridges and jumps. The North Cascade District has established a partnership with the Mountain Street Dirt Crew free ride mountain biking club to establish free ride trails near the Shellburg Falls Recreation Area. The District and MSDC have established an adopt-a-trail agreement to design and construct free ride mountain bike trails. The District approves and monitors trail development while MSDC is responsible for on the ground trail design, construction and maintenance. Currently a .5 mile has been established. This short trail has a variety of trail features and difficulties and is designed for riders to train on. During FY 07 a 1-1.5 mile trail will be constructed. This will be the primary trail. The trail will have features with varying degrees of difficulty allowing a variety of options for riders of different skills.

### **Santiam Horse Camp:**

The Santiam Horse Camp is a 9 site moderately developed equestrian camp and day-use area. Amenities include drinking water, picnic shelter, corrals, manure bins, restrooms, and trailer parking both in camp and in the day-use area. Along with this camp a system of trails is being developed. The first 6 mile loop was completed during FY 06. During FY 07 a new loop will be designed and constructed. These trails are nonmotorized multi-use trails for horse back riding, mountain biking and hiking.

**Trails:** As within the Shellburg Falls Recreation Area the trails around the Santiam Horse Camp are designed as loops of varying difficulties and lengths. Trail segments are also designed keeping in mind the future goal of linking to Forest Service land to the east. The current trail near the Horse Camp offers an average degree of difficulty and length. There is currently a need for 2 smaller loops for the beginner trail users to train on or for short day-use excursions from the Horse Camp. ODF will design and construct 2 short loops, one which is easy in difficulty and one which is moderate in difficulty. The length of these trails is about 6 miles.

**Road Access:** ODF will resurface Xmas Tree Road from Monument Peak to Horse Camp in order to improve access to the Santiam Horse Camp.

### **Crooked Finger OHV:**

Along the Crooked Finger Road near Scott's Mills there is a significant amount of ATV and motorcycle use. Currently this use is located at an area which is unsafe for both ATV users and for those traveling along the roadway to the Butte Creek Falls Recreation Area. A new site away from the more heavily traveled section of Crooked Finger Road has been selected for motorized use. During FY 07 ODF will design a system of motorized trails and a staging area at this location. Staff will work with local motorized trail users to design this system of trails and staging area.

**Trails:** ODF will design a system of motorized trails, estimated length 5 miles. ODF will also work with BLM to survey trails that travel over both ODF and BLM ownership if feasible.

Staging Area: ODF will design and construct day-use/staging area for OHV use.

**Butte Creek Falls:**

The Butte Creek Falls Recreation Area is a picturesque site containing a 3 site campground, day-use area and two impressive waterfalls made accessible by the Butte Creek Falls Hiking Trail. This site will have minimal new development during FY 07.

**Trails:** In order to allow campers to access Butte Creek Falls without having to walk along the road a 1 mile hiking trail will be constructed. This trail will link Butte Creek Falls Camp to the Butte Creek Falls Trail. This trail will increase the miles of trail in the area and provide a much safer access from camp to the falls.

**Rhody Lake:**

Rhody Lake is contained within the High Lakes Recreation Area. At Rhody Lake there is a 3 site campground and day-use area with parking and a picnic area. Near Rhody Lake is a trailhead that accesses the 1.5 mile High Lakes Trail. This trail provides a link to Butte Lakes. The Butte Lakes are a scenic, primitive recreational site offering dispersed camping, site seeing, fishing and hiking opportunities.

**Trails:** As with all trail design the goal is loop trails of varying difficulty. During FY 07 ODF will connect Rhody Lake to High Lakes trail with ½ mile multiuse nonmotorized trail. This trail will loop around Rhody Lake and then connect into the High Lakes Trail allowing visitors to access the entire trail system without walking on the road.

**Rock Creek Recreation Area**

The Rock Creek Recreation Area is composed of 4 dispersed campsites along Rock Creek. The camps are minimally developed offering fire rings, picnic tables, garbage collection and seasonally placed portable restrooms.

**Trails:** Currently there are no developed trails in this area. Future trail development goals are to establish a multiuse nonmotorized trail that will connect Rock Creek to the Santiam Horse Camp area and trails. This will give visitors camping at Rock Creek access to an extensive trail network. During FY 07 the district will construct a 1 mile multiuse trail along Rock Creek. It will connect the campsites and give campers an opportunity to take a scenic hike or bike ride in the area. This trail is the first stage in connecting the Rock Creek area to the Santiam Horse Camp trails.

**Rocky Top/Natural Arch:**

The Rocky Top/Natural Arch Recreation Area is a high elevation site in the foothills of the Cascade Mountains. This scenic area is composed of two hiking trails and day-use areas offering breathtaking views of the Cascade Mountain Range. Rocky Top at 5000 feet is the high elevation within the Cascade foothills. Natural Rock Arch is an impressive forty foot tall rock arch made accessible by a rugged hiking trail. Though there are no designated camping areas, there is dispersed camping within the area.

**Trails:** The primary goal of trail design in this area is to create a long trail system connecting Rocky Top to Natural Arch and to other scenic areas within USFS ownership. ODF will work with USFS to form a cooperative agreement to construct 2 mile hiking trail in the Rocky Top area that will lengthen and enhance the Rocky Top trail system. If a cooperative agreement is acquired this trail will be constructed during FY 07.

**Abiqua Falls:**

Abiqua Falls is an impressive waterfall located on Mount Angel Abbey ownership. This waterfall is both unique as a waterfall and a geological formation. This waterfall would be a valuable addition to public ownership. ODF will investigate the feasibility of a land trade to improve the public access to the Falls with the adjacent state ownership at the top of the Falls.

**Fee System:**

In many of North Cascades recreation areas use has continually increased. This is most evident at the small developed campsites. Often at these sites campsites are filled above capacity or held by a single group for the maximum of 21 days. In order to manage visitor use and to ensure natural resources are protected ODF will implement campground fees consistent with policies on other districts at Santiam Horse Camp, Butte Creek Campground, Rock Creek Camps and Rhody Lake Campground. These fees will also help to reduce maintenance costs.

**Volunteer Program:**

Volunteer hours have increased steadily during the past year. In order to add value to the volunteer experience North Cascade will implement a recognition program for volunteer service on the district.

**Maintenance Program:**

As the level of recreational use increases a strong maintenance program is a necessity. ODF will investigate a Personal Service Contract in the Butte Creek area to perform summer maintenance and visitor assistance. Due to long travel times to these sites a personal service contract may be the most efficient option for maintenance in the Butte Creek and High Lakes Area.

The district will utilize Mill Creek Department of Correction inmate crews and Marion County inmate crews to maintain recreation areas, trails, campgrounds and related facilities.

**Recreation Mapping**

In order to provide an accurate representation of recreational resources and to aid with future goals. The district will complete an ongoing mapping project that will map using to scale existing recreation areas, campground and other facilities. In addition, staff will map using GPS the location of signs, kiosks and gates.

## Forest 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 District IP on pages 5 and 6.

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 on going land exchanges on the District currently. There are no land exchanges planned to begin during the FY 2007.

## Other Integrated Forest Management Operations

### **Firewood**

The North Cascade District has a firewood program that is tied to the completion of timber sales. Timber sale contracts require any non-merchantable wood or cull material that has been yarded to the landing and is suitable for firewood to be placed in a pile. This wood is then made available to the public by issuing a permit for two cords of firewood. There is a great demand by the public for firewood. Some years there is an abundant supply of firewood. Other years there is very little firewood available.

Offering firewood permits to the public involves the timber sale administrator, clerical staff, and management. The time spent on each timber sale area opened up for firewood is approximately eight hours a week by the sale administrator, sixteen hours a week by the clerical staff, and four hours a week by managers. Law enforcement also spends time checking permits out in the firewood areas. In a typical year, the firewood season lasts for approximately three months. Areas with limited public access are set aside for commercial firewood cutting or special interest groups such as church organizations or community assistance groups. Overall, the firewood program on the Santiam State Forest is highly visible and provides an important face-to-face interaction with the public.

### **Miscellaneous Forest Products**

The North Cascade District has an active miscellaneous forest products program on State Forest lands. Part of the District's landscape management objectives is to provide for diverse stand types that over time can produce a sustainable source of a wide variety of forest products. Some forest products are available on a seasonal basis, such as mushrooms, while others like vine maple, moss, and salal are available year-round. Harvest is always dependent upon markets and commercial demand. Many of these products are available throughout the forest landscape, and can be found in the different stand structures on the forest. Other products (i.e. mushrooms, moss, etc.) require specific stand types and growing conditions to be most productive. The most popular products requested on this District are salal, mushrooms, moss, and flat rock. Moss and salal can be found over most of the District, while mushrooms grow best at lower elevations and in younger, dense stands of timber, usually in the under 40-year old closed single canopy stands. State lands foresters and office staff on average spends approximately 2 hours per week answering questions and issuing permits for this program. During fiscal year 2005, non-timber forest products generated \$3,740 from 80 commercial permits. The District also issued 107 Free Use Permits that allow harvest or collection of lesser volumes of the same non-timber forest products.

## Planning (and Information Systems)

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

Some stands within the District will be inventoried during the FY 2007 using the Stand Level Inventory procedures. This information will replace the current inventory system with new information that is better suited to structure based management planning and decision making. Approximately 30 stands totaling approximately 2,300 acres will be inventoried using contractors. Another 7 stands totaling approximately 950 acres may be inventoried during this time frame by District employees. The stands inventoried by the District are potential harvest units for the Fiscal Year 2008 AOP. All of the stands within the FY 2007 AOP were inventoried in previous years.

### **Fish and Wildlife Surveys**

Almost all of the streams located within operations proposed in the FY 2007 Annual Operations Plan have been surveyed to determine beneficial use (i.e. fish bearing or not). The only exceptions to this will follow the Oregon Forest Practices *Revised Guidance on Interim Water Classifications (1995)* to determine beneficial use on these streams or be surveyed by an ODF co-op fish survey crew during the survey season in the spring of 2006 prior to sale layout.

Surveys for the Northern Spotted Owl (*Strix occidentalis*) will be conducted by a contractor during the 2006 field season. The information gathered from these surveys is used during planning activities to determine how to proceed with forest activities without adversely affecting the owls and their habitat. Surveys will be specifically done on a portion of commercial management operations identified for the fiscal year 2006, and all commercial management operations identified for the fiscal years 2007 and 2008 as well as known owl sites.

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

<b>Operation</b>	<b>Species (NSO/MM)</b>	<b>Status</b>
Camp 26	NSO	Surveyed 2002, 2003, 2004, 2005; will be surveyed again in 2006
Gates Hill	NSO	Surveyed in 2005; will be surveyed again in 2006
South Gawley	NSO	Surveyed in 2003, 2004, 2005; will be surveyed again in 2006
South Rock Creek Thin	NSO	Surveyed in 2004, 2005; will be surveyed again in 2006
Shellburg Creek Loop.	NSO	Surveyed in 2005; will be surveyed again in 2006
South Rock Railroad Alt.	NSO	Surveyed in 2004, 2005; will be surveyed again in 2006

### **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.

The Northwest Oregon FMP provides that watershed analyses shall be performed on all priority watersheds “within the ten-year period following plan adoption”. No watershed assessments for the entire Santiam State Forest are planned to begin in fiscal year 2007.

### **Research and Monitoring**

OSU is continuing a study on Swiss Needle Cast. The study is looking into growth trends following thinning in stands with varying levels of Swiss Needle Cast damage, the interactive effect of Swiss Needle Cast with the intensity of thinning and the interaction between thinning, Swiss Needle Cast and the seed source for the stand involved. Four of the study and control plots are located on the Santiam State Forest. The study is scheduled to last until 2011.

### **Other Planning Operations**

Reforestation planning that will occur during the 2007 fiscal year include the following: vegetation management plans, density management plans, reforestation plan for the 2007 planting season, seed sowing plans, and seed collection plans. These plans will be developed at different times throughout the fiscal year.

Planning will begin in the spring of 2006 for the FY 2008 Annual Operations Plan. These plans will be completed in the spring of 2007. The annual operations plan will provide specific details on the harvest operations that will be set up and auctioned in the 2008

fiscal year. The plan will also provide an overview of the roads and engineering projects, non-commercial forest management operations, recreation management, planning, public information and education and administrative activities that will take place during FY 2008. This plan is developed according to guidance and standards found in the *NWO State Forests Management Plan, North Cascade District Implementation Plans, Santiam State Forest Recreation Plan* and the *Oregon Forest Practices Act*.

## Public Information and Education

This Annual Operations Plan will undergo a public review. Following that review, a public involvement summary will be added as an Appendix to this document.

The District often receives requests for job shadowing opportunities. Job shadowing usually involves a high school student or occasionally a college student who is interested in natural resources. The District arranges for these students to spend a work day with either a State Lands Forester, Stewardship Forester, Road Specialist or other job position they may be interested in. The initial contact is made by the student, so it is impossible to pin down when this activity will occur. The District has also conducted school to work tours in conjunction with Personnel. Additional tours may possibly occur on the Santiam State Forest during the 2007 fiscal year.

### **Forest Education and Interpretation**

The Santiam State Forest Recreation Coordinator has developed a small but growing Forest Education and Interpretative Program. ODF offers educational programs to local school children both in the classroom and in the forest. Students learn about forest environment, management and ethics with educational hands-on activities. During the past year 1,300 students and adults have participated in education/interpretive programs.

Several summer programs are conducted for local community libraries within close proximity to the Forest. In addition several interpretive nature hikes are presented each summer. The most often used site for these programs is Shellburg Falls. In the future interpretive hikes will be held in the Butte Creek Falls area to provide greater access to interpretive programming for the public who live in northern Marion and southern Clackamas counties.

The recreation staff has been successful in obtaining a Title III Grant from the Clackamas County Board of Commissioners, for an After-School Forest Education and Interpretation Program. This program has been developed by the recreation staff with the cooperation of the Oregon State University Extension Service in Clackamas County. It consists of several classroom and field sessions for elementary-age students from First through Fifth-grades. Subjects include Forest Ecology, Forest Management, Forest–User ethics and fire prevention and safety. The District has also taken the experience gained from

developing these curriculums and programs to teach similar programs and lead field trips during the school year in Marion and Linn County. This has been a popular program and will continue to grow with the cooperation of local schools and county agencies.

The District will continue to strengthen its education program. When possible the District will use funding from Title III grants and from grants through Oregon Forest Resource Institute to subsidize this program. In addition to programming for students during the academic year, North Cascade will continue to offer interpretive programming in the form of summer reading program partnerships with local libraries and guided hikes within the Santiam State Forest.

## Administration

There are a total of 12.5 permanent positions, and 3 seasonal positions, that comprise the State Forest Team at the Santiam Unit. In addition, the District Forester and Assistant District Forester provide key leadership and support to the program. The organization is structured as follows:

- Management Unit Forester, FUS2
  - Planning Forester, NRS2 (job share position)
  - Operations Forester, NRS2
  - Reforestation Forester, NRS2
  - Foresters (3 positions), NRS1
  - Technician, FMT (shared with Protection)
  - Intern (1 position, Forest Management)
- District Engineer, FUS2
  - Road Specialist, NRS1
  - Recreation Specialist, NRS1
  - Equipment Operator, HMS 2
  - Laborer 2 (Heavy Equipment Assistant)
  - Interns (2 positions; Forest Engineering, Forest Recreation)

The organization consists of 2 functional units: Forest Management and Forest Engineering. The Forest Management unit is responsible for forest-level Planning, Stand Level Inventory, and for Commercial and Noncommercial Forest Management Operations. This group produces the AOP, timber sale contracts, reforestation and young growth management contracts, conducts stand level inventories, and administers the special forest products and firewood programs.

The Forest Engineering unit is responsible for Roads and Recreation. This group produces the different plans and projects associated with roads including the AOP road information, transportation plans, road maintenance plans and schedules, and other engineering related plans. The recreation program is also housed within this unit. As

such, this group produces plans and contracts needed to develop campgrounds, trails, and associated facilities. In addition, Recreation program personnel coordinate most of the Public information and education done on the District.

Personnel from both units are involved in the preparation of the AOP, and in the development of commercial forest operations contracts. There is less overlap in the noncommercial forest operations, so additional efforts are needed to ensure that objectives for recreation, reforestation, and special forest products are understood by all.

The organization fits well within the budget instructions and guidance that is available for next fiscal year at this point in time. The Reforestation program is highly cyclical in workload due to the nature of projects such as tree planting, fertilization, and vegetation management. During active reforestation and young growth management operations, additional resources are always needed to cover logistical concerns.

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# APPENDICES

A. Summary Tables

B. Pre-Operations Reports

C. Public Involvement

D. Additional Maps

### TIMBER HARVEST OPERATIONS - FINANCIAL SUMMARY

District: North Cascade

Fiscal Year: 2007

Date: 6/27/2006

Operation	Payment Type	Fund %		County	Sale Quarter	Net Acres		Volume (MMBF)			Value		
		BOF	CSL			Partial Cut	Clear-cut	Con-ifer	Hard-woods	Total	Gross	Projects	Net
Camp 26 Thin	R	100%	0%	Linn	4	198	0	2.6	0	2.6	\$900,900	\$23,000	\$877,900
Gates Hill	R	90%	10%	Marion	1	84	155	3	0.4	3.4	\$1,099,500	\$73,700	\$1,025,800
Shellburg Creek Loop	R	100%	0%	Marion		135	0	1.9	0	1.9	\$669,550	\$14,600	\$654,950
South Gawley	R	100%	0%	Clackamas	2	0	115	3	0.04	3.04	\$587,750	\$78,000	\$509,750
South Rock Creek	R	100%	0%	Linn	3	306	0	3	0.03	3.03	\$1,042,200	\$177,083	\$865,117

<b>Total:</b>								<b>13.5</b>	<b>0.47</b>	<b>13.97</b>	<b>\$4,299,900</b>	<b>\$366,383</b>	<b>\$3,933,517</b>
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**Alternate Operations**

South Rock Railroad	R	100%	0%	Linn		0	85	4.2	0	4.2	\$1,487,500	\$15,200	\$1,472,300
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**TIMBER HARVEST OPERATIONS - FOREST STRUCTURE SUMMARY**

District: **North Cascade**      Fiscal Year **2007**      Date: **06/27/2006**

Operation	Area	Net Acres			Stand Structure Development Pathway			Structural Components	Comments
		Clearcut	Partial Cut	Total	Current	Post-Harvest	Desired	Green Trees	
<b>Butte Creek Basin</b>									
South Gawley		115	0	115	UDS	REG	GEN	575	
				0					
<b>Rock Creek Basin</b>									
Camp 26 Thin		0	198	198	UDS	UDS	LYR		
South Rock Creek	Area I	0	243	243	UDS	UDS	LYR		
	Area II	0	22	22	UDS	UDS	LYR		
	Area III	0	41	41	CSC	CSC	GEN		
				0					
<b>Scattered Basin</b>									
Gates Hill	Area I	155	0	155	UDS	REG	GEN	775	
	Area II	0	28	28	UDS	UDS	GEN		
	Area III	0	24	24	UDS	UDS	GEN		
	Area IV	0	32	32	UDS	UDS	GEN		
Shellburg Creek Loop		0	135	135	UDS	UDS	LYR		

<b>Total</b>	<b>270</b>	<b>723</b>	<b>993</b>
<b>Annual Range</b>	180-270	800-1200	980-1470

**Alternate Operations**

South Rock Railroad		85	0	85	CSC	REG	GEN	425	
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## FOREST ROADS SUMMARY

District: North Cascade

Fiscal Year: 2007

Date: 06/27/06

Operation	Construction		Improvement		Other Projects	Total Project Costs	Gross Value of Operation	Total Cost as a percent of Gross Value	Comments
	Miles	Cost	Miles	Cost					
Camp 26	0.52	\$23,000	0			\$23,000	\$900,900	2.6%	
Gates Hill	3.11	\$45,000	0.56	\$2,400	\$26,300	\$73,700	\$1,099,500	6.7%	
Shelburg Cr. Loop	0.48	\$5,000	0.61	\$3,000	\$6,600	\$14,600	669,550	2.2%	
South Gawley Cr.	0.66	\$7,000	0	\$0	\$71,000	\$78,000	\$587,750	13.3%	bridge on Butte Cr.
South Rock Cr. Thin	1	\$45,240	2.66	\$131,843		\$177,083	\$1,042,200	17.0%	blow out repair & resurface work

<b>Total:</b>	<b>\$366,383</b>	<b>\$4,299,900</b>	<b>8.5%</b>
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### Alternate Operations

South Rock Railroad	0.3	\$15,200				\$15,200	\$1,487,500	1.0%	
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### Road Projects Not Associated with Commercial Forest Management Operations

						\$0			
						\$0			
						\$0			

## YOUNG STAND MANAGEMENT SUMMARY

District: North Cascade

Fiscal Year: 2007

Date: 12/05/05

Operation	BOF %	CSL %	Estimated Acres	Cost/Acre	Estimated Total Cost	Comments
<b>Rehabilitation</b>	<b>0%</b>	<b>0%</b>			\$0	
<b>Site Preparation</b>						
Chemical Site Prep.	100%	0%	273	\$110	\$30,030	
Planting Spots	100%	0%	73	\$80	\$5,840	Timber sale cost
Underburn	100%	0%	87	\$411	\$35,757	Timber sale cost
Broadcast burn	100%	0%	209	\$300	\$62,700	Timber sale cost
Slash Burning	100%	0%	896	\$20	\$17,920	Timber sale cost
<b>Planting</b>						
Initial Planting	100%	0%	389	\$80	\$31,120	
Interplanting	100%	0%	200	\$35	\$7,000	
Underplanting	100%	0%	262	\$40	\$10,480	
Seedlings	100%	0%	671	\$100	\$67,100	
<b>Vegetation Management</b>						
All Basins	100%	0%	200	\$100	\$20,000	
<b>Tree Protection</b>						
tubing and pins	100%	0%	178	\$22	\$3,916	
Install tubes and pins	100%	0%	178	\$11	\$1,958	
<b>Precommercial Thinning</b>	100%	0%	250	\$57	\$14,250	
<b>Fertilization</b>	100%	0%	1100	130	\$143,000	
<b>Pruning</b>	100%	0%	149	60	\$8,940	Inmate Cost
<b>Other- Misc.</b>	100%	0%	350	60	\$21,000	All other costs

**Total: \$481,011**

Note: Initial plant and interplant acres exceed the ESTIMATED Annual Acres of the IP. Several units from past FY have been clearcut and need to be treated during this FY.

The pruning acres exceed the estimated acres. White pine pruning is on a 4 year pruning cycle. Some years will have more acres some years will have less or no acres at all. The 4 year cycle was not anticipated during the initial IP writing and the acres shown were a "best guess" Future IP plans will have an updated estimate.

## RECREATION MANAGEMENT SUMMARY

District: N. Cascade

Fiscal Year:

2007

Date: 12/05/05

Operation	Unit of Measure	Current	Construction Projects	Construction Cost (Funding)		Improvement Projects	Improvement Cost (Funding)		Total Cost	Comments
				ODF	Other		ODF	Other		
<b>Facilities</b>										
Campsites	Sites	23							\$0	
Day Use Areas		2							\$0	
Trailheads		8	1	\$5,000					\$5,000	
Interpretive Sites	Shelter	2	1	\$48,000					\$48,000	
(Other)	Sites								\$0	
<b>Trails</b>										
Non-Motorized	Miles	15.0	12.5	\$62,568	\$54,762				\$117,330	
<b>Maintenance</b>										
Mill Creek Crews	NA			\$9,600					\$9,600	
Supplies	NA			\$7,500					\$7,500	
Rocking	NA			\$11,000					\$11,000	
<b>Education/Interp.</b>										
Supplies	NA			\$2,000					\$2,000	
Busing	NA			\$4,000					\$4,000	
<b>Volunteers</b>										
Supplies	NA			\$2,000					\$2,000	
									<b>Total:</b>	<b>\$206,430</b>