



# Habitat Conservation Plan for State Trust Lands 2006 Annual Report

*November 2006*





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*November 2006*

HCP Science Section  
Land Management Division



WASHINGTON STATE DEPARTMENT OF  
**Natural Resources**  
Doug Sutherland - Commissioner of Public Lands

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# 1. Introduction

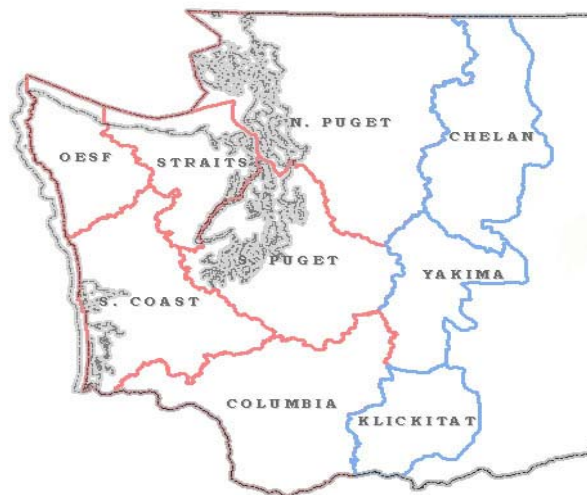
The Washington State Department of Natural Resources (DNR) manages roughly 2.1 million acres of forested state trust lands statewide. DNR's Habitat Conservation Plan (HCP) is a forest management plan that applies to approximately 1.6 million acres of forested state trust lands within the range of the northern spotted owl (*Strix occidentalis caurina*). Authorized under the Endangered Species Act (ESA), the HCP is a partnership between the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (now known as NOAA Fisheries Service) (collectively, the Services) and DNR. The HCP was signed in January 1997.

In general, the HCP guides DNR's management of forested state trust lands west of the crest of the Cascade Mountains and those on the eastern slopes of the Cascades, from the Canadian border to the Columbia River. To manage this habitat more efficiently and effectively, HCP lands have been broken into nine planning units based primarily on large watersheds (Figure 1.1). The HCP enables DNR to comply with ESA requirements by providing conservation objectives and strategies that provide habitat for listed and unlisted species while providing certainty, flexibility, and stability in meeting its trust responsibilities.

As new scientific data become available and an increased understanding of forest ecosystems is gained, DNR will continue to work with the Services to use adaptive management in adjusting strategies to better accomplish HCP conservation goals.

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## Planning Units



**Figure 1.1.** HCP planning units

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**Westside planning units:** Columbia, North Puget, Olympic Experimental State Forest (OESF), South Coast, South Puget, and Straits

**Eastside planning units:** Chelan, Klickitat and Yakima

The trust land Habitat Conservation Plan includes habitat management strategies for both ESA listed species and unique habitats.

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## Elements of the HCP

### ESA Listed Species' Habitats Protected

HCP management strategies focus primarily on habitat conservation and enhancement for species listed under the ESA. DNR's habitat management plan identifies specific conservation strategies for the northern spotted owl, marbled murrelet (*Brachyramphus marmoratus*), and riparian dependent species such as bull trout and salmon. These strategies and their specific objectives are designed to conserve and enhance habitats that are ecologically appropriate for the support of multiple species, including those listed under the federal Endangered Species Act.

### Multiple Species Protected

In addition to habitat for ESA listed species, the conservation strategies developed for the HCP were designed to provide appropriate habitat protection for many other species that are not currently listed or protected under the ESA. The HCP also provides specific habitat protection appropriate for numerous state-listed species of concern. The department approached land management in this manner in order to avoid future disruptions in management planning due to new ESA listings.

### Unique Habitats Protected

Protection of specific habitats includes identifying critical habitat types such as caves, cliffs, talus slopes, wetlands, and nesting, roosting, and foraging sites for many species.

### Adaptive Management

Ongoing research and monitoring may identify needed changes in management practices to address specific species and habitat needs; therefore, the HCP also contains a dynamic, scientifically based adaptive management strategy.

This snag was created using a modified chainsaw to create wildlife habitat.



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## Highlights from Fiscal Year 2006

### Riparian Forest Restoration Strategy Pilot Projects Established

In 2006, the department completed commitments to establish and have reviewed by the Services region pilot projects for the Riparian Forest Restoration Strategy (RFRS) in three of DNR's four Westside regions. Pacific Cascade, South Puget Sound and Northwest regions now have approval for full implementation of the RFRS. In conducting the pilot projects, region biologists and foresters contributed considerable innovation and brought insight into the operational challenges and implementation opportunities. Among the region contributions was the idea of substituting snag creation for



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down wood creation when doing so improves wildlife habitat.

By hiring new staff, DNR was able to increase monitoring of RFRS prescriptions and experimental thinning. Active effectiveness monitoring was established in the South Puget and North Puget planning units. Effectiveness monitoring is designed to test the assumptions of the RFRS and explore adaptive management options to improve the effectiveness of the strategy. The findings will be incorporated into HCP research.

### **Implementation of Older Forest Targets to Reach Planning Unit Objectives**

In an effort to manage towards the expected future forest conditions discussed in the HCP, the Board of Natural Resources this year formalized policy direction on older forests. The department will target 10 to 15 percent of each Western Washington HCP planning unit for older forests based on structural characteristics over time. Older forests are represented by the niche diversification and fully functional stages of stand development as defined by DNR (2004). According to the General Silvicultural Strategy in the Policy for Sustainable Forests (DNR 2006a), DNR will actively manage suitable structurally complex forests toward these objectives for older forest.

The suitability of a structurally complex stand to be managed to meet older forest conditions depends not just on the stand's characteristics, but also on conditions in the larger landscape. The percentage of the planning unit in a structurally complex condition; the location and size of these stands; their proximity to old growth or other structurally complex forest stands; and/or the scarcity of old growth or other structurally complex stands are all factors in determining if a stand is suitable for contributing to older forest targets. Assessment of the landscape conditions can identify the relative contribution that a structurally complex forest stand can make toward achieving these targets.

### **Five Landslide Hazard Zonation Projects Completed**

During the past seventeen months, state lands geologists have been working to provide a statewide screening tool for slope stability using the Cooperative Monitoring, Evaluation, and Research Committee (CMER) Landslide Hazard Zonation (LHZ) procedure. Landslide Hazard Zonation projects include maps of landslides and landforms, which are grouped by relative stability, together with extensive reports describing conditions of slope stability as they may be impacted by management activities. This process will create a better screening tool to ensure that timber harvests and other activities do not occur on unstable slopes. These projects have been completed for the Tahuya, Siouxon, and Clearwater-Warm blocks in the Western Washington planning units and the Queets and Matheny blocks in the OESF. Work is underway on the Toandos Peninsula and Ozette in DNR's Olympic Region, Reese Creek in South Puget Sound, and Black Hills in Pacific Cascade.

### **Budget Commitment for HCP Implementation Increased**

DNR requested and the legislature agreed to increase the appropriation for the HCP Science Section by nearly \$1.8 million in the 2005-2007 biennium. This funding supports the expansion of HCP research and monitoring activities.

In addition, DNR has further committed to the research and monitoring program by adding four new permanent positions. These include:

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- 1) A landscape ecologist who will provide expertise in OESF landscape planning; review HCP habitat definitions (such as the definition of northern spotted owl dispersal habitat); and aid in the development of long-term conservation strategies, such as the marbled murrelet and headwaters conservation strategies currently under development.
  - 2) An HCP implementation monitoring field coordinator position. This additional staffing should allow the department to increase the number of HCP elements evaluated during the annual implementation reviews, as well as the rigor with which they are evaluated.
  - 3) A temporary OESF research coordinator position was converted to a permanent position.
  - 4) DNR formed an Earth Sciences Group, which works on region consultation and research and monitoring related to slope stability issues. A new geologist position created within the group will assist regions in assessing their proposed activities for HCP issues of concern, as well as work on the development of landslide hazard zonation maps.

### **Settlement Agreement Reached**

This settlement agreement, which was reached in March 2006, resolved *Washington Environmental Council, et al. v. Sutherland, et al.*, litigation brought in King County Superior Court in October 2004. The parties believe they have reached an agreement that meets the core objectives of all parties. The agreement lays out a number of important tasks that the parties will work cooperatively to accomplish, and strengthens the critical link between the sustainable harvest calculation and the HCP conservation strategies.

The parties to the agreement include:

*Conservation groups*—Washington Environmental Council, National Audubon Society, Conservation Northwest, and Olympic Forest Coalition

*State government*—Commissioner of Public Lands Doug Sutherland, the Board of Natural Resources, and DNR.

*Interveners*—American Forest Resource Council; Pacific, Skamania, Snohomish and Skagit Counties; City of Forks; Quillayute Valley, Toutle Lake, Willapa Valley and Castle Rock School Districts; and Willapa Harbor Hospital.

### **Additional Projects Undertaken**

- Initiated Eastern Washington old growth definition development, funded by \$100,000 appropriated by the State Legislature
- OESF Forest Land Planning initiated
- Headwaters Conservation Strategy initiated
- Completed first year and initiated second year of northern spotted owl surveys for Southwest Washington
- Earth Sciences Group established
- Services' concurrence attained for the use of variable density thinning to create functional northern spotted owl dispersal habitat

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- Installed riparian and spotted owl effectiveness monitoring sites
  - Initiated development of the long-term conservation strategy for the marbled murrelet for the OESF, Straits, South Coast, and Columbia planning units
  - Sustainable Forestry Initiative (SFI) certification of Eastern Washington forested trust lands occurred in 2006 to complement the Western Washington forested trust lands certified in 2005
  - Glacier deep-seated landslide pilot study completed
  - Redesigned marbled murrelet habitat identification process for the North Puget Planning Unit to focus on the assessment of high quality habitat
  - Developed plan for marbled murrelet habitat identification in the South Puget Planning Unit



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## 2. Silvicultural Management Activities

Silviculture can be defined as the art and science of cultivating forests to deliberately attain desired conditions. The silvicultural data for this report comes from DNR's Forest Management Planning and Tracking (P&T) database, which is a program to input and track data about forest management activities. This includes information on timber harvests, forest site preparation, forest (seedling) regeneration, vegetation and pest management, and other activities. These data can be queried by date, HCP planning unit, habitat type, or other criteria to garner information for this and other reports. Each year, the HCP Annual Report includes data for all activities reported as complete in P&T in the reporting period.

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### Trends

The levels and types of silvicultural management activities practiced on forested state trust lands vary from year to year. However, the reasons for these variations may not be obvious. There are a number of environmental and market conditions that influence where and when certain activities are carried out. The following paragraphs offer a guide to help the reader understand some of these conditions and factors. In turn, this may help in interpreting the data presented in the tables and figures in chapters 2 and 3.

Proper management regimes vary with site conditions. Ecological constraints, such as unstable slopes and critical habitat, may dictate which activities are implemented in a given location. Economic factors also dictate what can be done at a particular time. Budget allocations and market conditions influence the timing and amount of silvicultural activities that can be carried out. All silvicultural activities are applied within a context of specific objectives to achieve ecological outcomes, a long-term sustainable flow of forest products, and other benefits. DNR employees prioritize activities such as herbicide applications based on available resources and relative benefits.

Purchasers' timber removals, meanwhile, are driven by two main factors: the harvest contract length and market conditions. Timber harvest contract length may be as long as five years, but the average length has been shortened from 36 months in 1991 to approximately 18 months today. The shortening of contract lengths is due to a strengthening market, which reduces the need to allow purchasers a longer contract period to account for market uncertainty.

To further complicate things, timber stands may be sold in one year, but not harvested until as much as five years later. Since this report covers only silvicultural activities completed in one fiscal year, there may be a lag time between changing economic or environmental conditions and changes in levels of reported activities.

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In comparing activity levels for fiscal year 2006 to those in fiscal year 2005 or the mean from fiscal years 1999 through 2005, there are several noticeable differences. For timber harvest activities, the overall acreage was similar to the 7-year mean acreage, but significantly lower than fiscal year 2005 totals. However, FY 2005 had very high timber removal rates—the highest since FY 1990—due to healthy markets and favorable weather. Timber sales and removals remained strong this reporting period. The increases in forest site preparation and forest regeneration in FY 2006 (higher than both the 7-year mean and FY 2005 total) could be related to the high FY 2005 harvest rates. Site preparation generally follows logging and is designed to enhance the success of the next generation of trees. In addition, DNR has requirements to replant harvested stands. This regeneration is completed as soon as possible following harvest to achieve the highest long-term potential revenue for the trust. Pest management activity rates were noticeably lower than the 7-year mean, but identical to those in FY 2005. This is to be expected, as DNR now rarely practices pest management techniques for economic and other reasons.

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## Definitions

### Commercial Timber Harvest

DNR has a number of different types of timber harvests that may be employed on state trust lands, depending on environmental and economic factors; many of these harvest types have been employed on state forested trust lands since HCP annual reporting began (Tables 2.1, 3.2, and 3.3). Some can be used frequently across landscapes, while others are appropriate only in limited locations given a certain set of conditions. The following definitions describe, in general terms, harvest types that may occur in both HCP and non-HCP landscapes. In addition to trees required for retention as part of the harvest type, State Forest Practices Rules (WAC 222) HCP commitments and other department policies may require additional trees be retained to protect other important landscape features or habitats such as riparian management zones, large structurally unique trees and unstable slopes.

The harvest type definitions are grouped according to two general classifications. One is regeneration harvest types in which the objective is to regenerate a significant even-aged cohort (e.g. clearcuts, seed tree and shelterwood cuts). The other is individual tree selection harvest types that describe a spectrum of harvest activities (e.g. traditional commercial thinnings, variable density thinnings, and perpetual thinning where there is never a regeneration harvest).

‘Cohort’ is a term used to describe forest stand components that are statistically distinct. Generally, cohorts are identified when forest management unit objectives require them to be managed separately from other stand cohorts. For example, cohorts such as live wildlife reserve trees, snags, and large woody debris are statistically distinct because statutes, regulations, and DNR’s trust land HCP require their management and rotation beyond a single rotation.

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## REGENERATION HARVEST TYPES (WITH PLANTING OR NATURAL REGENERATION)

### Clearcut (Variable Retention Harvest)



Legacy trees left following a clearcut harvest to provide habitat and a seed source for future generations.

A timber harvest that removes the stand of trees while retaining or reserving live trees, snags, and down wood for habitat and other values. These reserve trees may be in small scattered clumps or dispersed individually throughout portions or the entire stand.

### Seed Tree Intermediate Cut

The first timber harvest in a series conducted as part of the even-aged seed tree silvicultural system. The purpose is to provide a desirable seed source to establish seedlings. Up to 10 trees per acre may be left following this harvest.

### Shelterwood Intermediate Cut

The first timber harvest in a series conducted as part of the even-age shelterwood system. The purpose is to provide shelter (typically shade) and possibly a seed source for the seedlings that are regenerating the stand. Up to 20 trees per acre may be left following this harvest, generally disbursed across the stand.

### Phased Patch Regeneration Cut

An even-age timber harvest method using small patch cuts (1 to 5 acres) to progressively harvest and regenerate a single stand over a period of up to 15 years. Several separate patches are harvested at a single point in time within a forest management unit (FMU). After an adequate green-up period (5-10 years), additional patches are harvested and the process repeated until the FMU is entirely harvested.

### Temporary Retention First Cut

A partial cut timber harvest where selected overstory trees are left for a portion of the next rotation. Shelterwood and seed tree harvests are traditional examples with relatively short retention periods. Habitat objectives increase the length of retention periods up to the time of pre-commercial or smallwood thinnings. The purpose of this harvest method is to retain overstory trees without diminishing establishment of a new stand. Two-aged stands can be an outcome when some level of overstory is left through the entire rotation.

A young forest that was treated with a smallwood thinning to speed its development into habitat.

### Salvage Cut (may or may not be a Regeneration Harvest)

Salvage cuts are used to log trees that are dead, dying or deteriorating due to fire, insect damage, wind, disease or injuries.



## INDIVIDUAL TREE SELECTION HARVEST TYPES

### Smallwood Thinning

A partial cut timber harvest in young stands (typically less than 40 years of age). Smallwood thinning maintains or enhances the stand's growth potential, and improves the quality of the residual stand.

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### **Late Rotation Thinning (Older Stand Thinning)**

A partial cut timber harvest that extends the rotation age of a stand to more than 80 years of age, or achieves a visual or habitat objective that requires larger trees. Stands eligible for 'late' thinning are typically ages 45-70 years and have expressed diverse size classes.

### **Variable Density Thinning**

Thinning to create a mosaic of different stand densities on a scale of approximately 1/4 to 1 acre that capitalizes on landforms and stand features. DNR uses variable density thinning to encourage development of structural diversity in areas where spotted owl habitat is needed or to meet other objectives defined in individual forest management unit silvicultural prescriptions.

### **Selective Product Logging**

A timber harvest that removes only certain species above a certain size which are of high value. This typically is a pole or cabin log sale or an individual high value tree removal.

### **Shelterwood Removal Cut**

The second or final harvest in a series of harvests conducted as part of the even-aged shelterwood system. The purpose is to remove overstory trees that create shade levels that are too high for the new understory to thrive under.

### **Two Age Management – Westside**

An even-age harvest method that is essentially the same as a temporary retention except that the overstory trees are not planned for removal until the time of the planned rotation for the younger component of the stand.

### **Uneven-Aged Management – Ponderosa Pine Selection System**

Uneven-age management is normally achievable only on dry ponderosa pine sites. It is a timber harvest conducted as one step in a silvicultural system with the objective to create or maintain a forest stand in a condition with three or more age cohorts. Cohorts are typically 20 years or more apart in age.

## **Site Preparation**

Site preparation is defined as hand or mechanized manipulation of a site, most often following logging, which is designed to enhance the success of regeneration by creating microsite conditions conducive to the establishment and growth of desired species. The following are definitions for the types of site preparation used on DNR-managed lands.

### **Aerial Herbicide**

Helicopter application of herbicides is used to achieve site preparation objectives.

### **Ground Herbicide**

Ground-based application of herbicides is used to achieve site preparation objectives.

### **Ground Mechanical**

Mechanized equipment is used to achieve site preparation objectives.

### **Hand-cutting**

Use of hand equipment to cut stems of existing vegetation to achieve site preparation objectives.



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### **Pile and Burn**

Logging slash is placed in piles, generally using mechanized equipment, then the piles are burned. This is often done as part of a logging operation.

### **Broadcast Burn**

Prescribed fire is allowed to burn over a designated area to achieve site preparation objectives.

## **Forest Regeneration**

The act of renewing tree cover by establishing young trees naturally or artificially is called regeneration. DNR uses two techniques to regenerate stands.



This Douglas-fir seedling was hand-planted in a stand following harvest.

### **Hand Planting**

Seedlings of various species (or species mixes) are planted by hand.

### **Natural Regeneration**

Allowing naturally produced seedlings to regenerate a site; successful accomplishment of this objective is generally assessed by a thorough regeneration survey of the stand.

## **Vegetation Management**

Vegetation management consists of intermediate management treatments or entries following regeneration in a stand. These treatments are designed to encourage the success of certain species by reducing competition from less

desirable species. DNR undertakes several vegetation management treatments on state trust lands.

### **Aerial Herbicide**

Helicopter herbicide applications are used to achieve vegetation management objectives.

### **Ground Herbicide**

Ground-based herbicide applications are used to achieve vegetation management objectives.

### **Hand-cutting**

Use of hand equipment to cut stems of existing vegetation to achieve vegetation management objectives.

### **Broadcast Burn**

Prescribed fire allowed to burn over a designated area to achieve vegetation management objectives.

### **Seeding Grass**

Annual grass species are broadcast seeded so that they will occupy newly prepared sites in place of noxious weeds. This is generally used east of the Cascade crest.

## **Pest Management**

Pest management treatments are aimed at maintaining pest populations within acceptable levels of risk of damage to forest stands. DNR has occasionally but rarely used several

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pest management techniques.

**Animal Repellant**

Chemicals or other products are applied to discourage animals from damaging seedlings in a plantation.

**Animal Trapping**

Animals are trapped to remove them from the area they are damaging.

**Shielding or Fencing**

A physical barrier is used to prevent animal damage.

**Aerial Pesticide**

Aerial application of an insecticide, herbicide or other chemical pesticide, such as using BT to treat spruce budworm infestations.

**Other**

DNR also employs several silvicultural management techniques that do not fit in any of the above categories. These techniques are defined below.

**Pre-commercial Thinning**

Removal of some trees in a stand, not for immediate financial gain, but rather to reduce stocking to concentrate growth on more desirable trees.

**Forest Fertilization**

Ground or aerial-based fertilization of forest stands using chemical fertilizers or bio-solids to enhance growth.

**Tree Pruning**

Removal of branches to enhance the wood quality in an existing tree's stem. The branches may also be removed as a separate forest product of value.

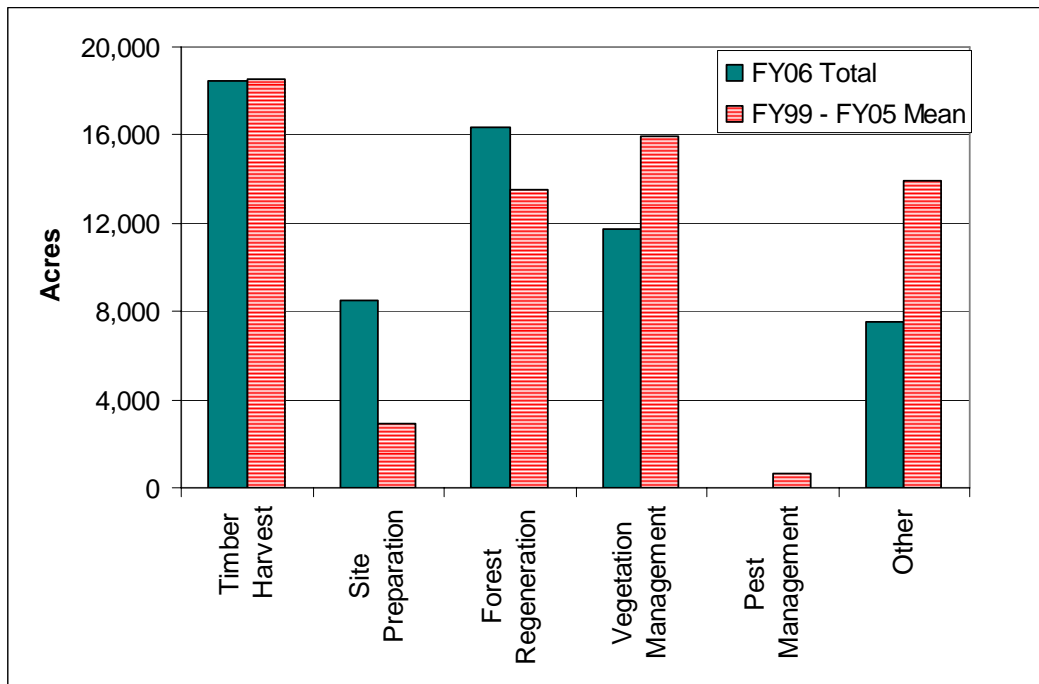
**Table 2.1.** Silvicultural management activities on HCP-managed lands by planning unit

	Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	FY 2006 Total	7 Year MEAN <sup>1</sup>
<b>Timber Harvest Type</b>	<b>Acres of Activity</b>										
Clearcut		2,237	281	3,475	770	1,994	775	1,674		11,206	10,479
Seed tree intermediate cut									256	256	137
Shelterwood intermediate cut		21					5			26	346
Phased patch regeneration cut							57			57	16
Temporary retention first cut					73					73	65
Salvage cut			618	3		33	80			734	474
Smallwood thinning		561	275		126	322				1,284	2,523
Late rotation thinning		240	197	516		335			753	2,041	1,935
Variable density thinning		327			40		80		182	629	300
Selective product logging			216				715			931	756
Shelterwood removal									216	216	11
Two-aged management										0	90
Uneven-aged management				48					926	974	1,415
<i>Timber Harvest Totals</i>	<i>0</i>	<i>3,386</i>	<i>1,587</i>	<i>4,042</i>	<i>1,009</i>	<i>2,684</i>	<i>1,712</i>	<i>1,674</i>	<i>2,333</i>	<i>18,427</i>	<i>18,546</i>
<b>Forest Site Preparation</b>											
Aerial herbicide		1,415		2,181		637	76			4,309	1,718
Ground herbicide		235		624	210	205	133	289		1,696	370
Ground mechanical			838						1,160	1,998	517
Hand cutting (slashing)										0	34
Pile and burn/broadcast burn		144	76		4	277	1	3	8	513	236
<i>Site Preparation Totals</i>	<i>0</i>	<i>1,794</i>	<i>914</i>	<i>2,805</i>	<i>214</i>	<i>1,119</i>	<i>210</i>	<i>292</i>	<i>1,168</i>	<i>8,516</i>	<i>2,875</i>
<b>Forest Regeneration</b>											
Hand planting		3,032	1,045	5,651	554	2,435	2,219	837	621	16,394	13,275
Natural regeneration										0	246
<i>Forest Regeneration Totals</i>	<i>0</i>	<i>3,032</i>	<i>1,045</i>	<i>5,651</i>	<i>554</i>	<i>2,435</i>	<i>2,219</i>	<i>837</i>	<i>621</i>	<i>16,394</i>	<i>13,521</i>

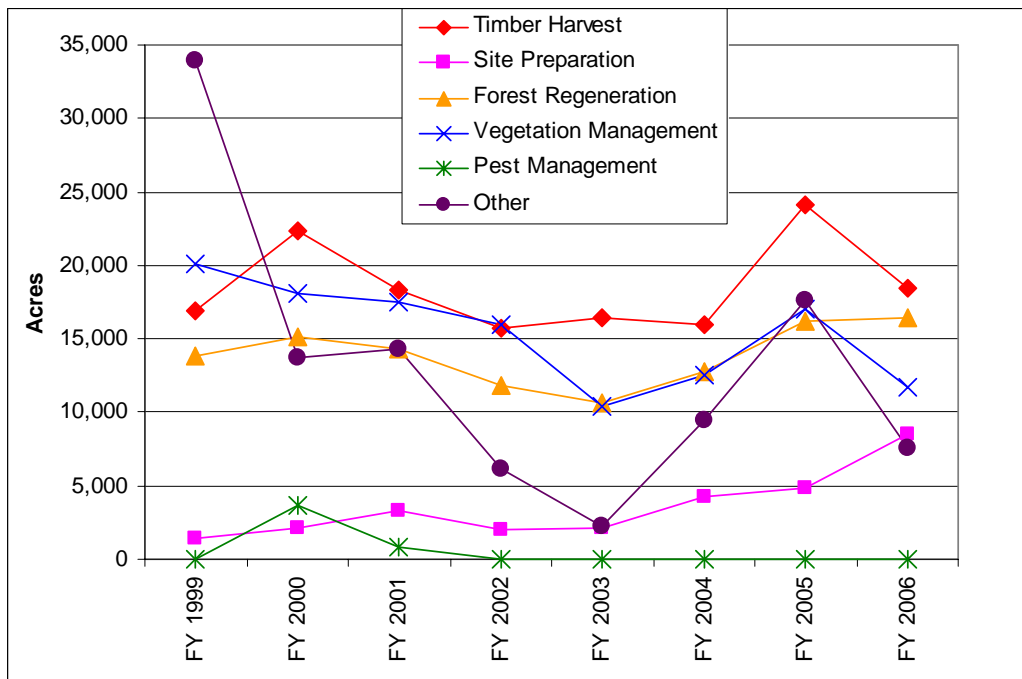
	Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	FY 2006 Total	7 Year MEAN <sup>1</sup>
<b>Vegetation Management</b>											
Aerial herbicide		423		74		1,121	76			1,694	2,857
Ground herbicide		171		1,523	97	731	139	842		3,503	3,811
Hand cutting		476		1,689	207	2,857	872	455		6,556	9,218
Seeding grass										0	56
Underburn						1				1	6
<i>Vegetation Management Totals</i>	<i>0</i>	<i>1,070</i>	<i>0</i>	<i>3,286</i>	<i>304</i>	<i>4,710</i>	<i>1,087</i>	<i>1,297</i>	<i>0</i>	<i>11,754</i>	<i>15,949</i>
<b>Pest Management</b>											
Animal repellent										0	13
Animal trapping										0	29
Shielding or fencing										0	93
Aerial pesticide										0	517
<b>Pest Management Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>651</b>
<b>Other</b>											
Pre-commercial thinning		109	798	846	4,127	554			1,090	7,524	12,001
Forest fertilization										0	1,891
Tree pruning		30								30	32
<b>Other Totals</b>	<b>0</b>	<b>139</b>	<b>798</b>	<b>846</b>	<b>4,127</b>	<b>554</b>	<b>0</b>	<b>0</b>	<b>1,090</b>	<b>7,554</b>	<b>13,924</b>
<b>Grand Totals</b>	<b>0</b>	<b>9,421</b>	<b>4,344</b>	<b>16,630</b>	<b>6,208</b>	<b>11,502</b>	<b>5,228</b>	<b>4,100</b>	<b>5,212</b>	<b>62,645</b>	<b>65,466</b>

Note: totals may not add due to rounding.

<sup>1</sup>These data are mean values for fiscal years 1999 through 2005.



**Figure 2.1.** Silvicultural activities in HCP planning units: fiscal year 2006 totals vs. means for fiscal years 1999 through 2005



**Figure 2.2.** Silvicultural activities in HCP planning units: fiscal years 1999 through 2006

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### 3. Nesting, Roosting, Foraging and Dispersal/Desired Future Condition Management

DNR is committed to providing habitat to help maintain nesting areas and facilitate movement of the northern spotted owl population through the landscape. To aid in this goal, Nesting, Roosting and Foraging (NRF) and dispersal management areas have been designated. Through ongoing research, DNR is trying to develop a better understanding of what comprises functional owl habitat and to learn what silvicultural techniques create suitable owl habitat.

When the HCP was written, DNR-managed lands were assessed for their potential role in spotted owl conservation. Those lands identified as likely to provide demographic support and contribute to maintaining species distribution were designated as NRF management areas. Suitable NRF habitat is primarily high quality roosting and foraging habitat with enough nesting structure interspersed that the whole area can be utilized by reproducing owls. Lands identified as important for facilitating owl dispersal were designated as dispersal management areas. The conservation strategy calls for maintaining at least 50 percent (Westside by Watershed Administrative Unit (WAU); Eastside by WAU for NRF and quarter-township for dispersal) of both designated NRF and dispersal management areas in suitable habitat at any given time. Acceptable management activities depend on the amount of habitat in a WAU or quarter-township and the habitat type present in the potential harvest area. In general, harvest activities must not increase the amount of time required to achieve habitat goals beyond what would be expected in an unmanaged stand. To ensure that procedures are being followed and goals met, the types and amounts of silvicultural activities in both designated NRF and designated dispersal management areas are tracked.



A stand developing into suitable NRF habitat with snags and multiple canopy layers.

In the Klickitat Planning Unit, forest health issues associated with overstocked stands of species more susceptible to drought, disease, and insect infestations are degrading forests. In addition, some lands originally designated as NRF management areas are not capable of sustaining suitable spotted owl habitat. This makes the original habitat goals difficult, if not impossible, to achieve. In April 2004, an amended spotted owl conservation strategy (HCP Amendment No. 1) was established to address the issues in the Klickitat Planning Unit. Field assessments, forest inventory data, and spotted owl demography data

were used to create new habitat targets for the area. Four sub-landscapes within the planning unit were created, with habitat targets based on those sub-landscapes (rather than WAUs or quarter-townships). In addition, dispersal management areas in the

Klickitat Planning Unit have been renamed Desired Future Condition (DFC) management areas. DFC lands have the same habitat commitments as dispersal lands, but are managed by vegetative series, with the goal of maintaining 50 percent of each vegetative series (by sub-landscape) in mature (60+ years old) DFC. Areas incapable of growing and sustaining habitat, and those better suited for a different habitat classification, have been reclassified. The results of these assessments and reclassifications are reflected in Table 3.1.



A dense, overstocked stand in the Klickitat Planning Unit. This stand is declining in health, and without thinning, it would likely not remain spotted owl habitat.

The Klickitat Amendment also changed the boundaries of the Klickitat and Yakima planning units to include the portion north of the Yakama Nation’s lands in the Yakima Planning Unit.

Through this change, approximately 23,000 acres of dispersal management area were transferred to the Yakima Planning Unit (reflected in Table 3.1).

**Table 3.1.** Comparison of acreage in designated NRF and dispersal/DFC management areas by planning unit

Designated Management Area: Date	Chelan	Columbia	Klickitat	North Puget	South Puget	Yakima	Total Acres
NRF: January 1997	5,647	54,157	20,096	109,409	2,648	13,567	205,524
NRF: June 1999	5,848	53,192	20,943	111,203	2,648	13,567	207,401
NRF: June 2000	5,848	53,192	20,974	111,203	2,648	13,567	207,432
NRF: June 2001	5,851	53,192	20,974	111,363	2,648	13,567	207,595
NRF: June 2002	5,851	53,252	20,974	111,363	2,648	13,567	207,655
NRF: June 2003	5,851	53,252	21,089	111,195	2,453	13,567	207,407
NRF: June 2004	5,851	53,252	21,098	111,359	2,648	13,567	207,775
NRF: June 2005	5,851	53,252	40,427	111,359	2,648	13,567	227,104
NRF: June 2006	5,851	53,252	40,427	111,359	2,648	13,567	227,104
Dispersal: January 1997	0	38,645	79,095	16,068	71,492	8,332	213,632
Dispersal: June 1999	0	35,324	79,095	15,344	75,302	8,332	213,307
Dispersal: June 2000	0	35,234	79,095	15,344	75,302	8,332	213,307
Dispersal: June 2001	0	35,234	79,095	15,344	75,302	8,332	213,307
Dispersal: June 2002	0	31,890	79,095	15,344	78,179	8,332	212,840
Dispersal: June 2003	0	31,890	79,095	15,344	78,179	8,332	212,840
Dispersal: June 2004	0	31,890	79,327	15,344	78,179	8,332	213,072
Dispersal/DFC: June 2005	0	31,890	19,066	15,344	78,179	30,819	175,298
Dispersal/DFC: June 2006	0	31,890	19,046	15,344	78,179	30,819	175,278

Note: totals may not add due to rounding.



The 1997 acreages in Table 3.1 were determined when the HCP was written. To obtain the 1999 figures, DNR calculated land transactions that had occurred between January 1997 and June 1999 and adjusted accordingly. In addition, field verification of the designated habitat occurred during this period, and any acres that were non-forested and not designated to provide spotted owl habitat were subtracted from the 1997 figures. Beginning in June 2000, the acreage figures were determined by taking the figures from the prior fiscal year and adding or subtracting any land acquired or disposed in a given habitat type and planning unit (See Chapter 6). For instance, in fiscal year 2000, 31 acres of NRF habitat were acquired in the Klickitat planning unit.

DNR is in the process of reconciling acreage and classification information in the transactions database with spatial data in DNR's corporate GIS data layer "owlmgmt". The GIS data layer will account for acquisitions, disposals, retained parcels (trust land transfers), and lands not designated to provide habitat for spotted owls. The reconciliation process is ongoing, and it is expected that the reconciled numbers will be reported in a future HCP Annual Report.

The following tables and graphs detail levels of silvicultural activities in designated NRF and DFC/dispersal management areas. For definitions of timber harvest types or other activities, see Chapter 2. The data were derived from reports of activities reported as completed in DNR's Planning & Tracking (P&T) database in fiscal year 2006.

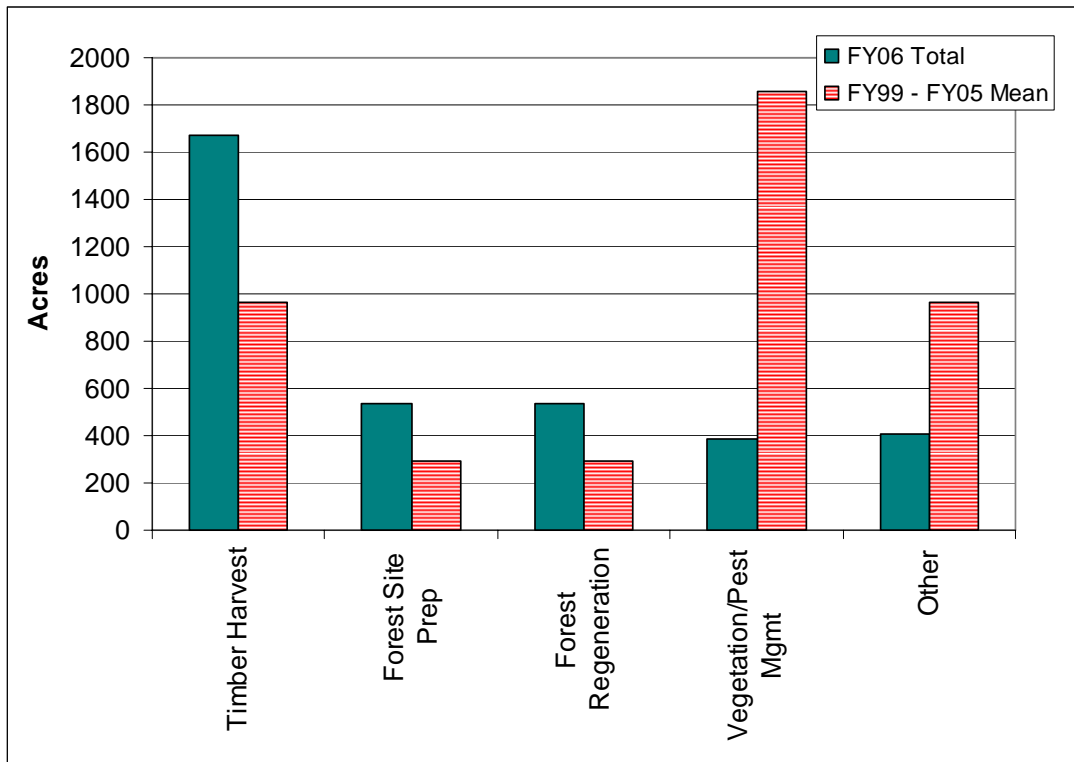
**Table 3.2.** Silvicultural activities in designated NRF management areas by planning unit

	Chelan	Columbia	Klickitat	North Puget	South Puget	Yakima	FY 2006 Total	7 Year MEAN <sup>1</sup>
Total Designated NRF Acres	5,851	53,252	40,427	111,359	2,648	13,567	227,104	239,699
% of Total Designated NRF Acreage	2.6%	23.4%	17.8%	49.0%	1.2%	6.0%	100.0%	100.0%
<b>Timber Harvest Type</b>	<b>Acres of Management Activity</b>							
Clearcut			102	159			261	439
Seed tree intermediate cut							0	22
Phased patch regeneration cut							0	1
Temporary retention first cut							0	11
Salvage cut			416				416	35
Smallwood thinning			273				273	84
Late rotation thinning			24	320			344	119
Variable density thinning		327					327	159
Selective product logging							0	24
Shelterwood removal cut							0	4

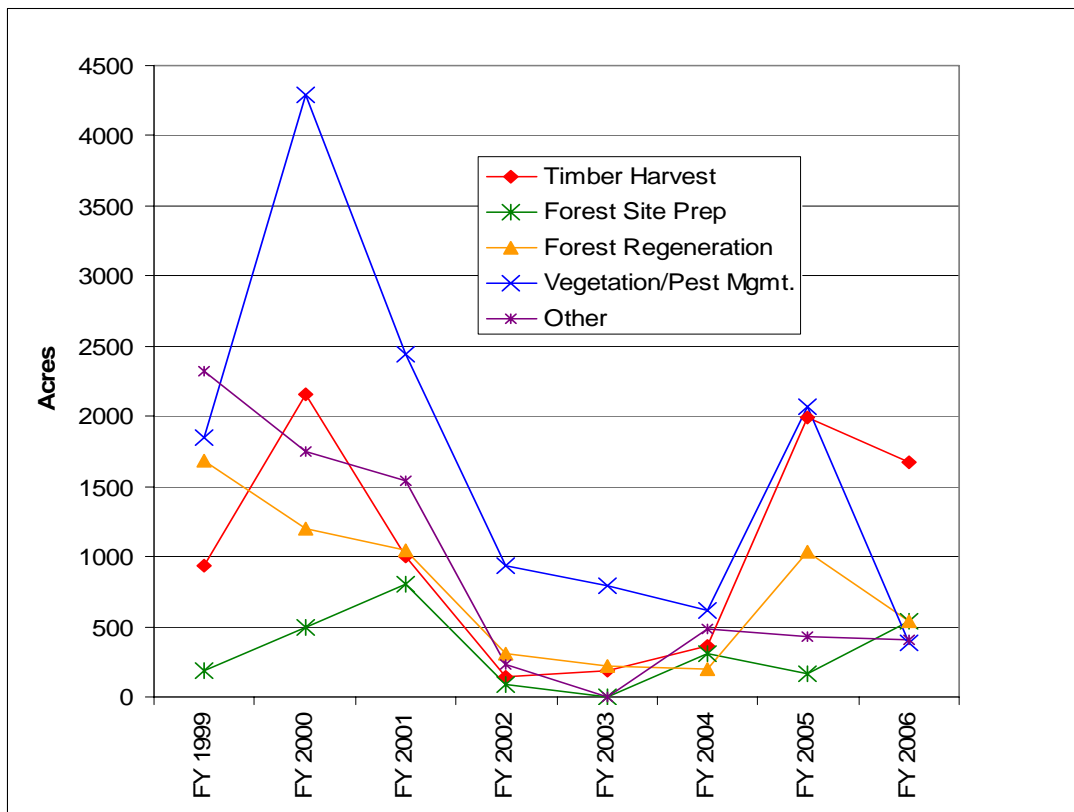
	Chelan	Columbia	Klickitat	North Puget	South Puget	Yakima	FY 2006 Total	7 Year MEAN <sup>1</sup>
Two-aged management							0	1
Uneven-aged management				48			48	66
<i>Timber Harvest Totals</i>	<i>0</i>	<i>327</i>	<i>815</i>	<i>527</i>	<i>0</i>	<i>0</i>	<i>1,669</i>	<i>965</i>
<b>Forest Site Preparation</b>								
Aerial herbicide							0	200
Ground herbicide		26					26	23
Ground mechanical			463				463	69
Pile and burn			49				49	0
<i>Forest Site Preparation Totals</i>	<i>0</i>	<i>26</i>	<i>512</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>538</i>	<i>292</i>
<b>Forest Regeneration</b>								
Hand planting		27	572				599	809
Natural regeneration							0	4
<i>Forest Regeneration Totals</i>	<i>0</i>	<i>27</i>	<i>572</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>599</i>	<i>813</i>
<b>Vegetation/Pest Management</b>								
Aerial herbicide							0	427
Aerial pesticide							0	417
Ground herbicide				90			90	406
Hand cutting (slashing)		115		179			294	605
<i>Vegetation/Pest Management Totals</i>	<i>0</i>	<i>115</i>	<i>0</i>	<i>269</i>	<i>0</i>	<i>0</i>	<i>384</i>	<i>1,855</i>
<b>Other</b>								
Pre-commercial thinning			378				378	844
Forest fertilization							0	120
Tree pruning		30					30	0
<i>Other Totals</i>	<i>0</i>	<i>30</i>	<i>378</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>408</i>	<i>963</i>
<i>Grand Totals</i>	<i>0</i>	<i>525</i>	<i>2,277</i>	<i>796</i>	<i>0</i>	<i>0</i>	<i>3,598</i>	<i>4,888</i>

<sup>1</sup>These data are mean values for fiscal years 1999 through 2005.

Note: totals may not add due to rounding.



**Figure 3.1.** Silvicultural activities in designated NRF management areas: fiscal year 2006 totals vs. means for fiscal years 1999 through 2005



**Figure 3.2.** Silvicultural activities in designated NRF management areas: fiscal years 1999 through 2006

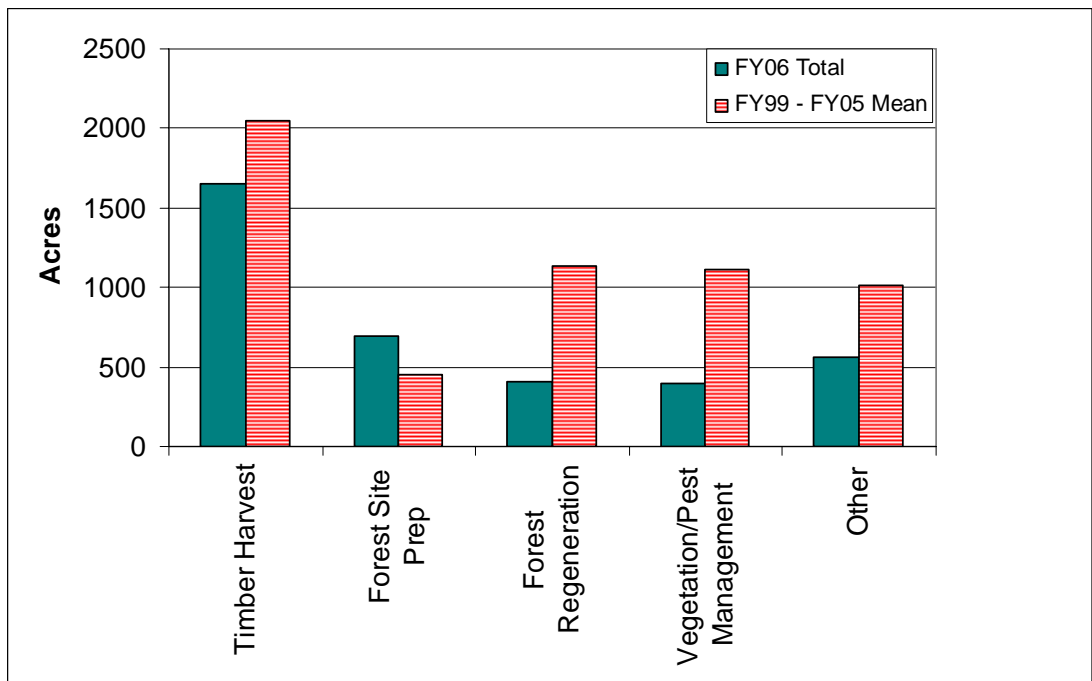
**Table 3.3.** Silvicultural activities in designated dispersal/DFC management areas by planning unit

	Columbia	Klickitat	North Puget	South Puget	Yakima	FY 2006 Total	7 Year MEAN <sup>1</sup>	
Total Designated Dispersal/DFC Acres	31,890	19,046	15,344	78,179	30,819	175,278	207,710	
% of Total Designated Dispersal/DFC Acreage	18.2%	10.9%	8.8%	44.6%	17.6%	100.0%	100.0%	
<b>Timber Harvest Type</b>	<b>Acres of Management Activity</b>							
Clearcut				96		96	624	
Shelterwood intermediate cut				5		5	54	
Temporary retention first cut						0	2	
Salvage cut		201				201	163	
Smallwood thinning						0	277	
Late rotation thinning		171			288	459	258	
Variable density thinning				80	164	244	126	
Selective product logging		216				216	44	
Shelterwood removal cut					213	213	48	
Uneven-aged management					217	217	455	
<i>Timber Harvest Totals</i>	<i>0</i>	<i>588</i>	<i>0</i>	<i>181</i>	<i>882</i>	<i>1,651</i>	<i>2,051</i>	
<b>Forest Site Preparation</b>								
Aerial herbicide			99			99	151	
Ground herbicide						0	70	
Ground mechanical		367			200	567	164	
Hand cutting (slashing)						0	34	
Pile and burn		27				27	34	
<i>Forest Site Preparation Totals</i>	<i>0</i>	<i>394</i>	<i>99</i>	<i>0</i>	<i>200</i>	<i>693</i>	<i>454</i>	
<b>Forest Regeneration</b>								
Hand planting		409				409	1,067	
Natural regeneration						0	71	
<i>Forest Regeneration Totals</i>	<i>0</i>	<i>409</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>409</i>	<i>1138</i>	
<b>Vegetation/Pest Management</b>								
Aerial herbicide						0	258	
Aerial pesticide						0	66	
Ground herbicide						0	255	

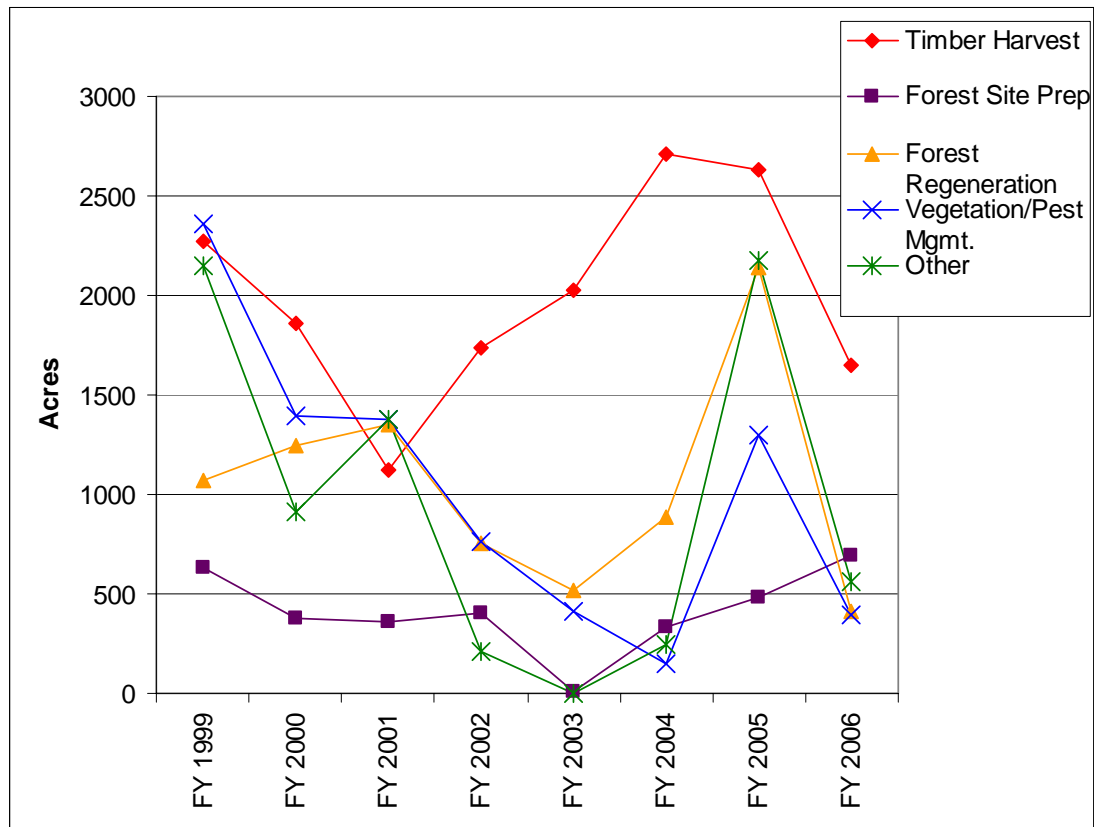
	Columbia	Klickitat	North Puget	South Puget	Yakima	FY 2006 Total	7 Year MEAN <sup>1</sup>
Hand cutting (slashing)	71		168	153		392	529
<i>Vegetation/Pest Management Totals</i>	<i>71</i>	<i>0</i>	<i>168</i>	<i>153</i>	<i>0</i>	<i>392</i>	<i>1,108</i>
Other							
Pre-commercial thinning					560	560	1,010
Forest fertilization						0	1
<i>Other Totals</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>560</i>	<i>560</i>	<i>1,011</i>
<b>Grand Totals</b>	<b>71</b>	<b>1,391</b>	<b>267</b>	<b>334</b>	<b>1,642</b>	<b>3,705</b>	<b>5,762</b>

<sup>1</sup>These data are mean values for fiscal years 1999 through 2005.

Note: totals may not add due to rounding.



**Figure 3.3.** Silvicultural activities in designated dispersal/DFC management areas: fiscal year 2006 totals vs. means for fiscal years 1999 through 2005



**Figure 3.4.** Silvicultural activities in designated dispersal/DFC management areas: fiscal years 1999 through 2006

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## 4. Non-Timber Management Activities

Numerous non-timber management activities take place on DNR-managed forested state trust lands. This section details the levels of the activities (numbers of sites/permits/leases and acres impacted) that DNR agreed to report on when the HCP was signed with the Services.

The HCP describes levels or amounts of non-timber activities that existed on HCP lands during the 1996 base year. At these 1996 levels, no or *de minimis* (insignificant) take (impacts to covered species) occurred. Any new or renewed contracts, permits, or leases for such activities cannot increase the level of take beyond this *de minimis* level; DNR must monitor the level of such activities and report them to the Services annually. However, some of the baseline non-timber numbers cited in the HCP are incorrect, as they included activities on all state lands, rather than just areas covered by the HCP. To derive accurate 1996 baseline figures, the numbers reported in the HCP were revised to include only activities that occurred on HCP lands. This revision was made and the corrected numbers were reported in DNR's first HCP Annual Report (DNR 1998).

DNR is continually working to improve its methods of tracking and reporting on non-timber activities. As DNR's systems improve, and we are able to collect more accurate data, there may be changes in reporting methods or corrections to our data. This year, as in past years, most of the data (e.g. number of permits to gather Christmas greens; acres of oil leases) were determined by utilizing reports from DNR's Asset Performance System (APS). APS reports were run using the categories of agreement types (grazing, communication site, etc.). The reports detailed the number of acres and leases or permits in a given county. Numbers from counties covered by the HCP were then added up to determine totals for the fiscal year. Levels of other activities (e.g. grazing permits and leases) were determined through data provided by the DNR region staff that monitor these activities. Utility rights-of-way were calculated somewhat differently than other activities, in that only new easements for fiscal year 2006 (not the total number active in that period) were reported.

The following are details for the categories of non-timber activities covered in this report, with explanations for trends or noticeable differences in the numbers where possible. In some cases, such differences may be due to improvements in DNR's methods for identifying and tracking the data.

### **Utility Rights-of-Way**

Right-of-way easements are granted to private individuals or entities for roads, powerlines, and pipelines. These easements can be granted when they will enhance trust assets and any detrimental effects can be offset or minimized.

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Unlike other categories of non-timber activities, utility rights-of-way are not reported on a cumulative basis. The annual report shows only the new permits issued during a given fiscal year, not all easements that are active during that reporting period. DNR has not had a system to tally total utility rights-of-way, primarily because many were granted in the early 1900's and hand-entered on records now in archives. DNR is currently working on a new system that would incorporate all existing data and give us an accurate total of active rights of way. Once the system is in place and fully functional, the numbers will be updated.

Right-of-way easements are detailed in two tables. Table 4.1 reports on the total number of new easements, but the acreage and mileage figures are only for easements that create a new "footprint", indicating that timber was cut and/or a new right-of-way was created. Table 4.2 reports on the acreage and mileage of all utility easements granted in the reporting period, whether they created a new footprint or not.

### **Special Forest Products**

Special forest products are items such as Christmas greens, medicinal plants, and western greens (typically used by florists). DNR policy is to promote the sale of special forest products where doing so will benefit the trusts and not cause significant damage to the environment. Permits are selectively granted to prevent habitat degradation.

### **Valuable Materials Sales**

Rock, sand and gravel (valuable material) sales are handled under special sale contracts. Most active commercial pits are not in forested areas. Generally, the few commercial contracts on forested trust lands are small sales from pits that are primarily used by DNR for road management.

The number of silvicultural pits and inactive commercial pits was not tracked until fiscal year (FY) 2003, when DNR began attempting to inventory all such pits. Since the initial inventory, changes (e.g. abandoning pits or creating new ones) have not been consistently tracked. DNR hopes to find the resources to begin tracking such data more regularly and consistently.

Early on in the implementation of the HCP, DNR had a substantial number of rock, sand, and gravel sales, but currently there are very few. This is primarily due to three factors: (1) the lengthy contract development process; (2) requirements for large sales to be approved by the Board of Natural Resources; and (3) periodic charges to keep contracts alive regardless of whether or not there are removals. Most rock, sand, and gravel sales are now going to private pits, which have fewer time and procedural constraints. This year, there was only one rock, sand, and gravel sale, which was handled as a direct sale. Direct sales are one-time agreements that remove only small amounts of the resource (a maximum of \$20,000 in value). Other (non-direct) sales are active for longer periods of time and/or have larger maximum removal value limits.

### **Prospecting Leases and Mining Contracts**

Like oil and gas leases, prospecting and mining leases are simply exploration agreements that allow searching for mineral deposits. A lease is converted to a contract if the lessee wants to commence active mining operations that could alter habitat, even if they do not result in extraction. There were no active mining operations (meaning activities that actually extract minerals) on HCP lands in 1996 and there were still none in FY 2006.



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In fiscal year 2005, the Attorney General's office signed an updated version of the Mineral Prospecting Lease and the Mining Contract. This allowed DNR to issue leases that had been delayed until the updated versions were approved. Once approval was acquired, DNR issued the leases that had been backlogged. The number (and acreage) of leases and contracts continued to rise in fiscal year 2006. This was partly due to continued work on removing the backlog and partially due to DNR granting new applications as they were submitted.

### **Oil and Gas Leases**

Oil and gas exploration leases simply allow a leaseholder to explore for underground deposits. The lessee has the sole and exclusive right to explore for, drill, extract, or remove oil and gas. Any proposed on-the-ground activities must undergo the SEPA review process and have an approved Plan of Operations. If the lessees want to actively drill or thump (measuring seismological tremors caused by the dropping of large weights or detonation of explosives), they must obtain an active lease. Regulations exist to protect water and air quality during active leases, and any exploration holes must be plugged following use. There has been only one active oil and gas lease on HCP lands (in 1996), and the well has since been abandoned and plugged.

The large increase in the number and acres of exploration leases in this reporting period is due to the two auctions held in fiscal year 2006 (in November 2005 and June 2006). Sixty new exploration leases were signed on areas covered by the HCP. According to DNR's revenue forecast (DNR 2006), the two exploration lease auctions held in calendar year 2005 are projected to yield \$3.5 million in revenue for the trusts in fiscal year 2006.

### **Grazing Permits/Leases**

Most DNR-managed grazing takes place on non-forested state trust lands. However, grazing is selectively allowed in forests guided by the HCP. DNR no longer leases non-forested grazing lands within Western Washington HCP boundaries; consequently all Western Washington grazing leases are on forested trust lands. The reasons for this are twofold: (1) at DNR's request, the Services approved exemptions for some trust lands in agricultural production; and (2) additional HCP HCLands that had been grazed have now been traded or sold.



Cattle grazing on forested state trust lands in Eastern Washington.

The vast majority of grazing on state trust lands is east of the Cascade crest on non-forested as well as forested lands. In Eastern Washington, DNR grazes its lands under permits and leases. Permits cover large acreages and have Resource Management Plans (RMPs) with ecosystem standards that must be met, including specific direction for turnout and removal dates and the number of animals allowed on the range. Leases are smaller in acreage, have an RMP and can allow grazing at any time during the year as long as guidelines in the RMP are followed. DNR is not currently able to distinguish forested from non-forested grazing on Eastside lands covered by the HCP. However, as the tracking system is refined, this will become possible.

### **Communication Site Leases**

Communication site leases allow private and public entities to attach communication equipment to towers (e.g. cell phone towers). These sites are typically on non-forested mountaintops or along second-growth highway corridors and typically are less than an acre in size. The road system used to access them is the same one used to access forest

management activities, and subject to the same management practices.

### Recreation Sites

These sites allow public recreation on forested state trust lands as long as it is compatible with state laws and the objectives of the Forest Resource Plan and HCP. A variety of sanctioned recreational activity takes place on DNR land—mostly disbursed across the landscape—including hiking, biking, horseback riding, off-road vehicle use, and camping. The number of sites and acreage reported are only for DNR-sanctioned trails, camping, and picnicking areas. These activities are detailed in Tables 4.3 and 4.4.

### Special Use Leases

Special use leases are issued for a wide variety of commercial and other uses primarily on rural trust lands, although they can be on resource or urban lands. “Miscellaneous” is often the best descriptor of these leases. Some examples of uses include: golf courses, small commercial businesses/buildings, commercial recreation facilities, colleges, take off or landing sites for paragliding, governmental and/or public use facilities, and stockpile sites. Special use leases do not cover major urban commercial uses, aquatic land uses, or any of the other categories reported in the following tables and described above. Often, but not always, these leases are for “interim uses,” and, as such, contain language that allows for termination should the department wish to take advantage of a “higher and better use” for the land.

**Table 4.1.** Evaluation of potential non-timber impacts compared to 1996 baseline levels

	1996 Base Year		FY2006 Total		7 Year MEAN <sup>1</sup>	
	Number of Leases/ Permits/ Sites	Acres	Number of Leases/ Permits/ Sites	Acres	Number of Leases/ Permits/ Sites	Acres
Utility Rights-of-Way <sup>2</sup>	9	4 ac. (3.3 miles)	1	0.97 ac (0.78 miles)	4.86	17.48 ac (6.59 miles)
<b>Special Forest Products</b>						
Western Greens	360	135,000	405	128,000	334	129,000
Christmas Greens	14	5,000	25	7,000	17	6,943
Misc. (Medicinal, cone, and transplant)	20		10		13	
<b>Special Forest Products Totals</b>	<b>402</b>	<b>140,409</b>	<b>449</b>	<b>135,342</b>	<b>372</b>	<b>136,290</b>
<b>Valuable Materials</b>						
<i>Silvicultural Pits</i>						
Active Silvicultural Pits	N/A	N/A	165	317	165 <sup>3</sup>	317 <sup>3</sup>
Inactive Silvicultural Pits	N/A	N/A	230	216	230 <sup>3</sup>	216 <sup>3</sup>
Abandoned Silvicultural Pits	N/A	N/A	55	56	55 <sup>3</sup>	56 <sup>3</sup>
Total Silvicultural Rock, Sand, and Gravel Pits (no commercial sales)	332	487	450	589	450 <sup>3</sup>	589 <sup>3</sup>

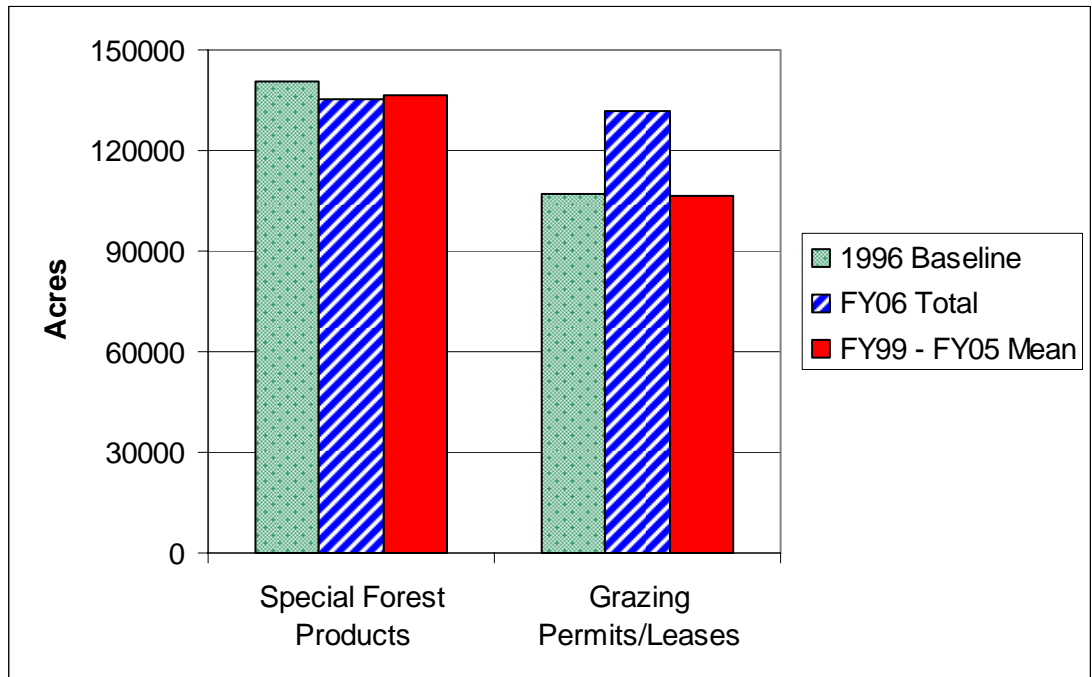
	1996 Base Year		FY2006 Total		7 Year MEAN <sup>1</sup>	
	Number of Leases/Permits/Sites	Acres	Number of Leases/Permits/Sites	Acres	Number of Leases/Permits/Sites	Acres
<i>Commercial Pits</i>						
Active Commercial Pits	N/A	N/A	7	101	10	133
Inactive Commercial Pits	N/A	N/A	2	66	2 <sup>3</sup>	66 <sup>3</sup>
Total Commercial Rock, Sand and Gravel Pits	28	281	9	167	9 <sup>3</sup>	167 <sup>3</sup>
<b>Sand and Gravel Pits Totals</b>	<b>360</b>	<b>768</b>	<b>459</b>	<b>756</b>	<b>459<sup>3</sup></b>	<b>756<sup>3</sup></b>
Rock, Sand, and Gravel Sales	17	222	0	0	4	56
Rock, Sand, and Gravel Direct Sales	25	50	1	0	7	11
<b>Valuable Materials (Rock, Sand, and Gravel) Sales Totals</b>	<b>42</b>	<b>272</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>67</b>
<i>Prospecting Leases/Mining Contracts</i>						
Leases	4	360	11	1,526	2	216
Contracts	15	3,650	10	2,025	8	1,565
<b>Prospecting Leases/Mining Contracts Total</b>	<b>19</b>	<b>4,010</b>	<b>21</b>	<b>3,551</b>	<b>10</b>	<b>1,781</b>
<i>Oil and Gas Leases</i>						
Exploration Leases	43	13,196	234	121,596	116	55,965
Active Leases	1		0		0	
<b>Active Oil and Gas Leases Totals</b>	<b>1</b>		<b>0</b>		<b>0</b>	
<i>Grazing Permits/Leases</i>						
Eastside	25	105,980	108	131,983	25	105,980
Westside	15	1,074	3	25	12	685
<b>Grazing Permits/Leases Totals</b>	<b>40</b>	<b>107,054</b>	<b>111</b>	<b>132,008</b>	<b>37</b>	<b>106,665</b>
<i>Communication Site Leases</i>						
Number Sites	56		62		61	
Number Leases	288		326		305	
<b>Recreation Site Totals</b>	<b>119</b>	<b>2,456</b>	<b>126</b>	<b>2,252</b>	<b>126</b>	<b>2,207</b>
<b>Special Use Leases Totals</b>	<b>90</b>	<b>5,792</b>	<b>85</b>	<b>5,834</b>	<b>92</b>	<b>5,861</b>

<sup>1</sup>These values are mean data from fiscal years 1999 through 2005 unless otherwise noted.

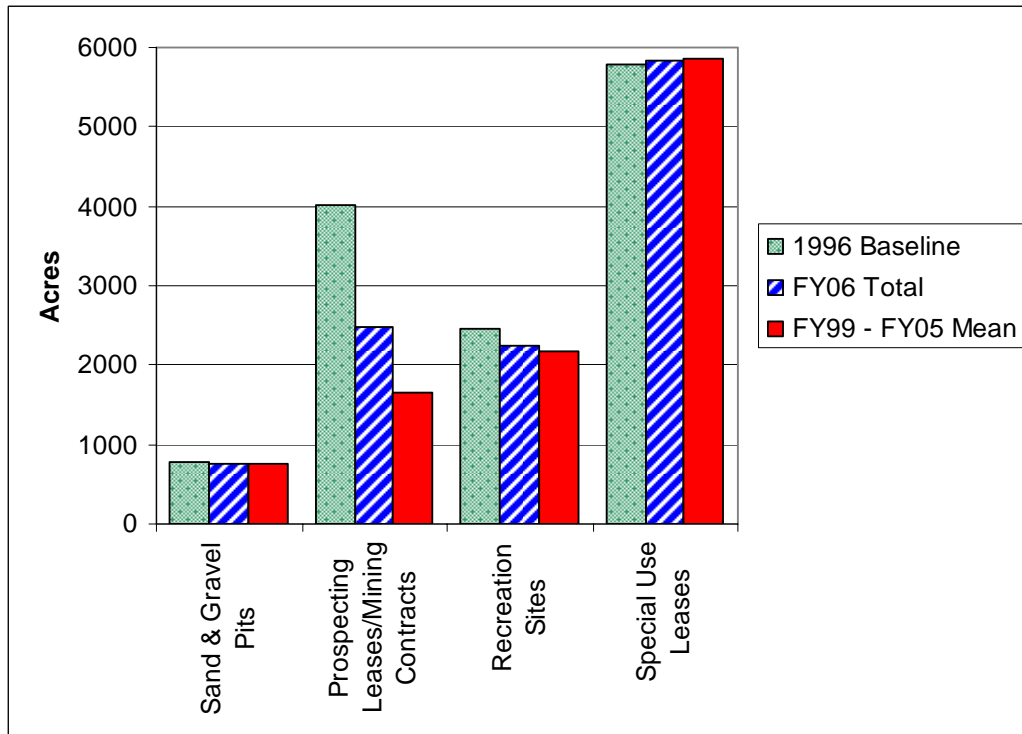
<sup>2</sup>Numbers for rights-of-way represent the number and acres of *new* rights-of-way issued during the reporting period. Numbers for all other activity categories represent the *total* numbers and acres of activity in force during the reporting period (not just new activities)

<sup>3</sup>These values are means from fiscal years 2003-2005; data were not available in prior fiscal years.

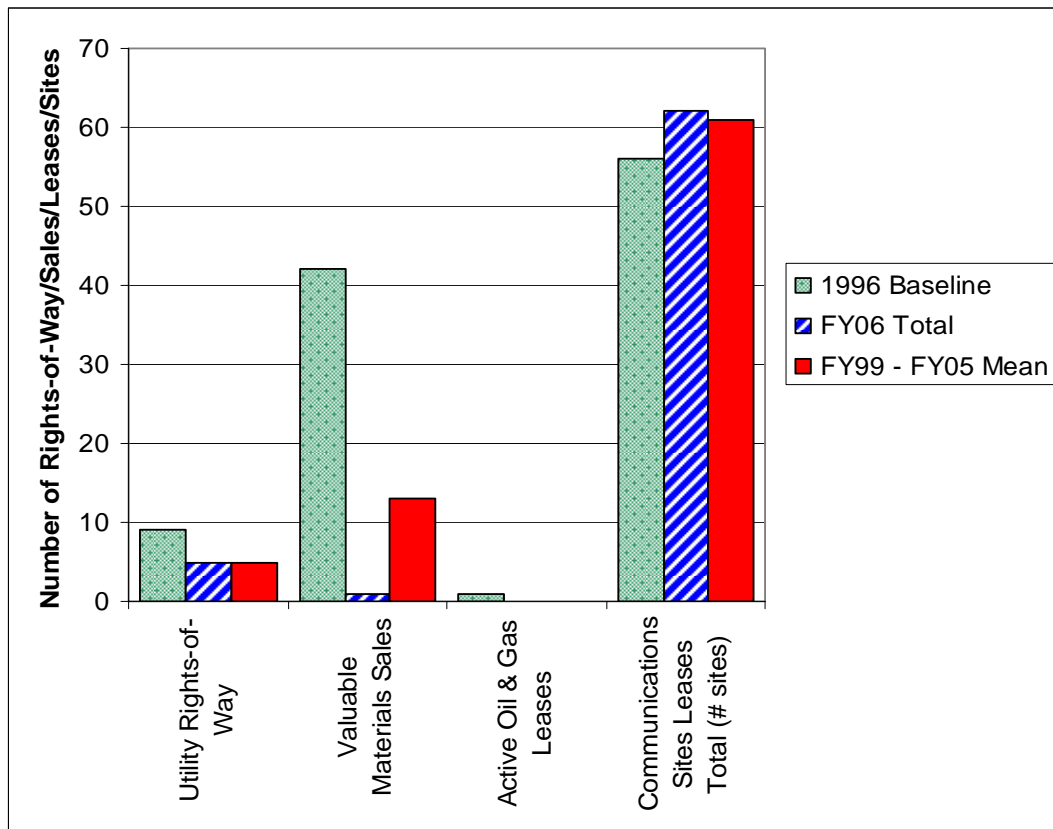
Note: totals may not add due to rounding.



**Figure 4.1.** Acreage comparison for special forest products and grazing permits/leases: 1996 baseline vs. fiscal year 2006 totals vs. means for fiscal years 1999 through 2005



**Figure 4.2.** Acreage comparison for sand and gravel pits; prospecting leases/mining contracts; recreational sites; and special use leases: 1996 baseline vs. fiscal year 2006 totals vs. means for fiscal years 1999 through 2005



**Figure 4.3.** Comparison of numbers of utility rights of way; valuable material sales; active oil and gas leases; and communication sites: 1996 baseline vs. fiscal year 2006 totals vs. means for fiscal years 1999 through 2005

**Table 4.2.** New utility right of way easements granted in fiscal year 2006

Planning Unit	Length of Easement Area (Miles)	Area of Easement (Acres)	Number of Easements Granted
North Puget <sup>1</sup>	0.78	0.97	1
Totals:	0.78	0.97	1

<sup>1</sup>This activity created a new footprint.

## Recreation/Public Use Activities

In 2004, DNR's Public Use section began implementing Region Public Use Inventory and Assessments (RIAs), which are used to inventory developed and dispersed recreation and public use (both sanctioned and unsanctioned). The process also identifies planning and management priorities and options for those areas. The goal is to update these plans each biennium as part of the budget process. Unlike most Annual Report topics, RIAs are completed for DNR regions, rather than by HCP planning units; data for any recreation areas outside of the HCP are not included in this report. Drafts of the initial RIAs for Northwest, Olympic, Pacific Cascade, and South Puget Sound Regions were available in

2004; the Southeast Region draft was created in 2005. No draft exists for Northeast Region.

The RIAs provide baseline information and support for recreation program management strategies, planning decisions, and funding requests. They also will help DNR to implement our Public Use Policy and establish consistent planning for statewide recreation. Each assessment provides an opportunity to discuss pressing issues and



Commissioner Southerland and friends enjoy hiking on a DNR trail.

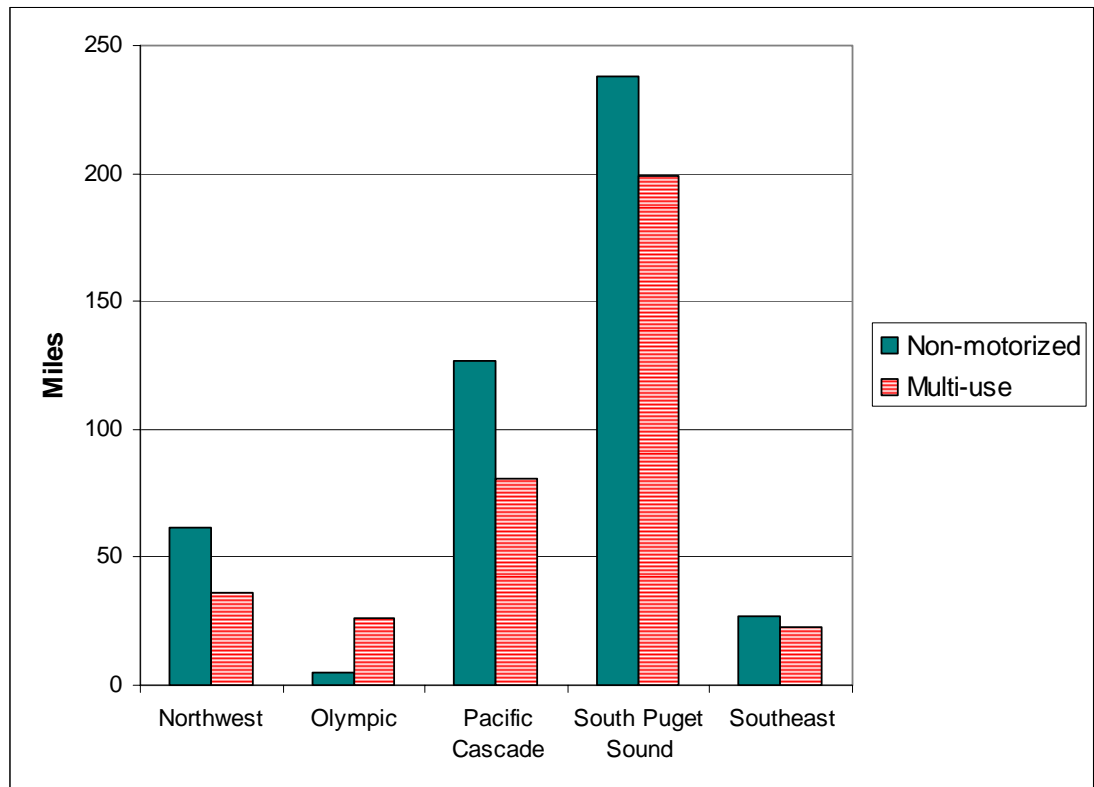
possible changes with a variety of interest groups, increasing public involvement in the process. Finally, they will provide information to assist in the design of management plans that advocate for natural environments and protect state trust lands and natural areas consistent with established mandates.

This report covers two aspects of public use reporting: trails (Table 4.3/Fig. 4.4) and picnic/camp sites (Table 4.4/Fig. 4.5). Sanctioned trails are reported on according to the type or types of authorized use. Sanctioned campsites are broken out by type (general use, host, or Americans with Disabilities Act (ADA)

compliant). As the assessments get updated, this information will also be updated.

**Table 4.3. Sanctioned recreation trails on forested state trust lands in fiscal year 2006**

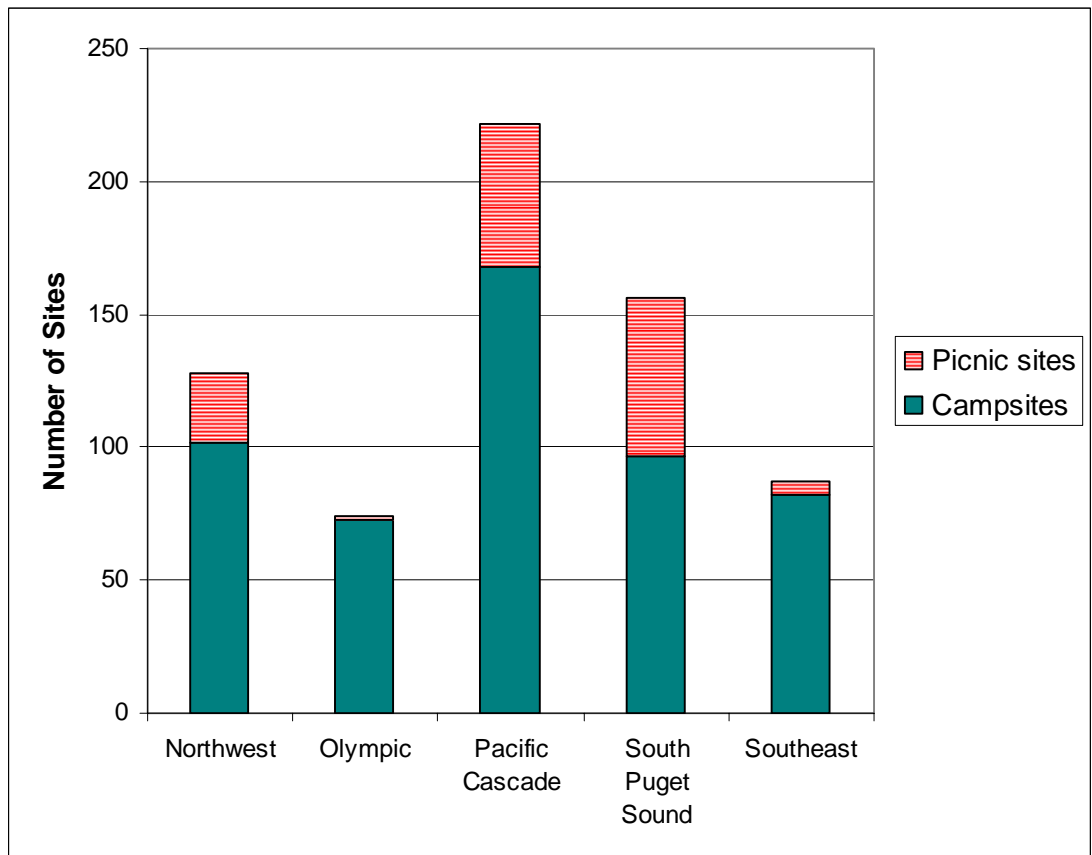
Type of Use	Region Data (Miles)					Statewide Totals
	Northwest	Olympic	Pacific Cascade	South Puget Sound	Southeast	
<b>Non-motorized</b>						
Horse/hike/bike	3	0	116.5	16.75	26	162.25
Horse/hike	0	0	1	66	0	67
Hike/bike	0	3	0	0	0	3
Hike	58.75	2	9.25	51	1	122
ADA compliant	0	0	0	4.2	0	4.2
Ski trails (on existing forest management roads)	0	0	0	100	0	100
<b>Non-motorized Totals</b>	<b>61.75</b>	<b>5</b>	<b>126.75</b>	<b>237.95</b>	<b>27</b>	<b>458.45</b>
<b>Multi-use: motorized/ non-motorized</b>						
Multiple use (no 4x4)	0	26	63	164.75	23	276.75
4x4 and multiple use	36	0	18	34	0	88
<b>Multi-use Totals</b>	<b>36</b>	<b>26</b>	<b>81</b>	<b>198.75</b>	<b>23</b>	<b>364.75</b>
<b>Trail Totals</b>	<b>97.75</b>	<b>31</b>	<b>207.75</b>	<b>436.7</b>	<b>50</b>	<b>823.2</b>



**Figure 4.4.** Total sanctioned non-motorized and multi-use trail miles by region

**Table 4.4.** Sanctioned camp and picnic sites on forested state trust lands in fiscal year 2006

Type of Use	Region Data					Statewide Totals
	Northwest	Olympic	Pacific Cascade	South Puget Sound	Southeast	
Campsites	99	68	136	96	80	479
Host campsites	0	1	6	0	1	8
ADA campsites	3	4	26	1	1	35
<i>Campsite Totals</i>	<i>102</i>	<i>73</i>	<i>168</i>	<i>97</i>	<i>82</i>	<i>522</i>
Picnic Sites	26	1	54	59	5	145
<i>Camp and Picnic Site Totals</i>	<i>128</i>	<i>74</i>	<i>222</i>	<i>156</i>	<i>87</i>	<i>667</i>



**Figure 4.5.** Total sanctioned camp and picnic sites by region



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## 5. Road Management Activities

Roads can negatively impact habitat in a number of ways. Improperly constructed or maintained roads can increase rates of slope failure, contribute sediment to streams, and create fish blockages, potentially harming salmonids and other aquatic and riparian obligate species.

In 2001, state Forest and Fish legislation (implemented through Washington State Forest Practices rules) required that by December 31, 2005 all forest landowners have Road Maintenance and Abandonment Plans (RMAPs) for their land. This includes all roads constructed or used for timber harvest and other forest practices since 1974 (WAC 222-24-051). In addition, all forest roads must be improved and maintained to the standards established in WAC 222-24 by the year 2016. In 2005, DNR completed RMAP assessments for all state trust lands and intends to be fully compliant with RMAP standards by 2016.

Under the HCP, DNR committed to developing and instituting a process to achieve comprehensive landscape-based road network management. The major components of this process include:



During road management, a fish-blocking culvert (above) was removed and replaced by a bridge (below) to allow for better fish passage and reduce damage to habitat.



- “the minimization of active road density;
- a site-specific assessment of alternatives to new road construction (e.g., yarding systems) and the use of such alternatives where practicable and consistent with conservation objectives;
- a base-line inventory of all roads and stream crossings;
- prioritization of roads for decommissioning, upgrading, and maintenance; and
- identification of fish blockages caused by stream crossings and a prioritization of their retrofitting or removal.” (DNR 1997, p. IV.62)

The department accomplishes these components through several overlapping planning processes. Forest Land Planning (currently underway in the South Puget, Columbia, and OESF planning units) evaluates the overall active road density. Through implementation of Forest Land Plans, individual project-level activities will address the site-specific alternatives to new road construction. Implementation of DNR’s RMAP requirements will address the last three components. The initial RMAP plans were completed on schedule in 2005, and yearly reassessments will evaluate the work completed during that year and prioritize the work to be completed during the upcoming year.

As part of the HCP Annual Report requirements, DNR tracks and reports on the number of road miles constructed (newly built roads); reconstructed (existing roads

brought back to driveable conditions); decommissioned (roads made impassible to vehicular traffic); or abandoned (roads stabilized and abandoned to Forest Practices standards); fish barriers removed; active forest practice road miles; and percent of road miles under RMAP (Table 5.1).

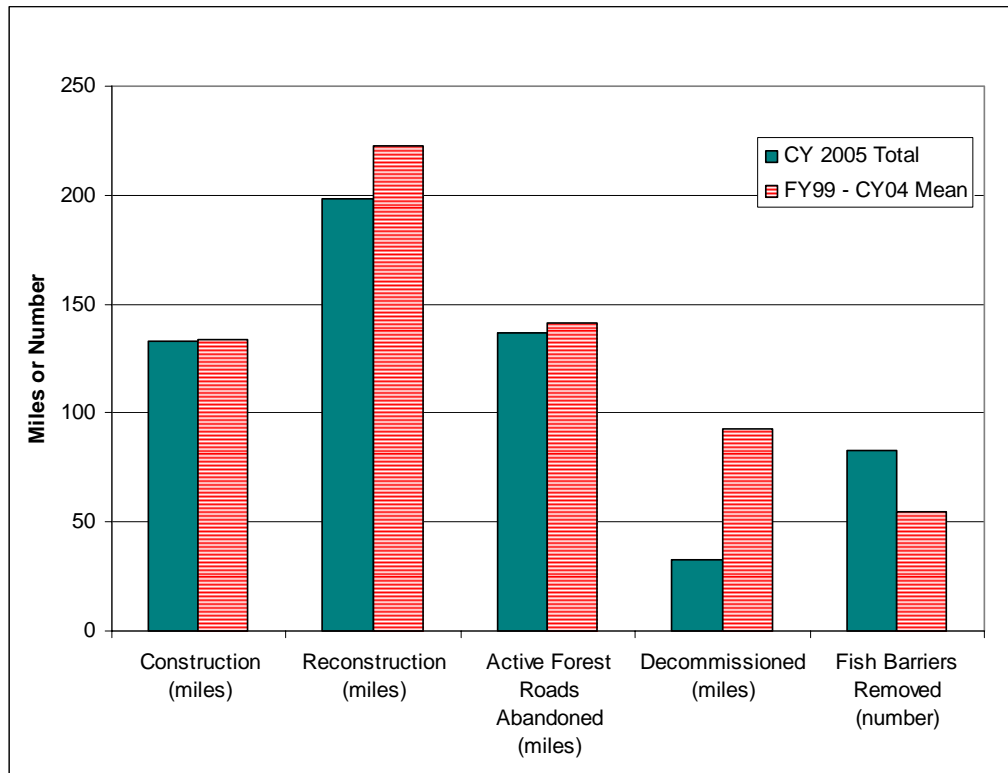
**Table 5.1.** Road management activities on forested state trust lands in calendar year 2005

Activity	Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	CY 2005 Total	7-Year MEAN <sup>2</sup>
Total Road Miles <sup>1</sup>	83	1,353	554	1,564	1,714	1,499	756	610	788	8,921	8,860
Miles Construction	0	29	3	40	6	19	13	11	12	133	134
Miles Reconstruction	0	33	1	124	6	19	3	5	7	198	223
Miles Active Forest Roads Abandoned	0	33	1	72	2	17	5	2	5	137	141 <sup>3</sup>
Miles Decommissioned	0	3	1	0	16	9	0	3	1	33	93
Number Fish Barriers Removed	0	7	7	1	29	22	1	6	10	83	55
Percent of RMAP Responsibility Assessed	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	54% <sup>3</sup>

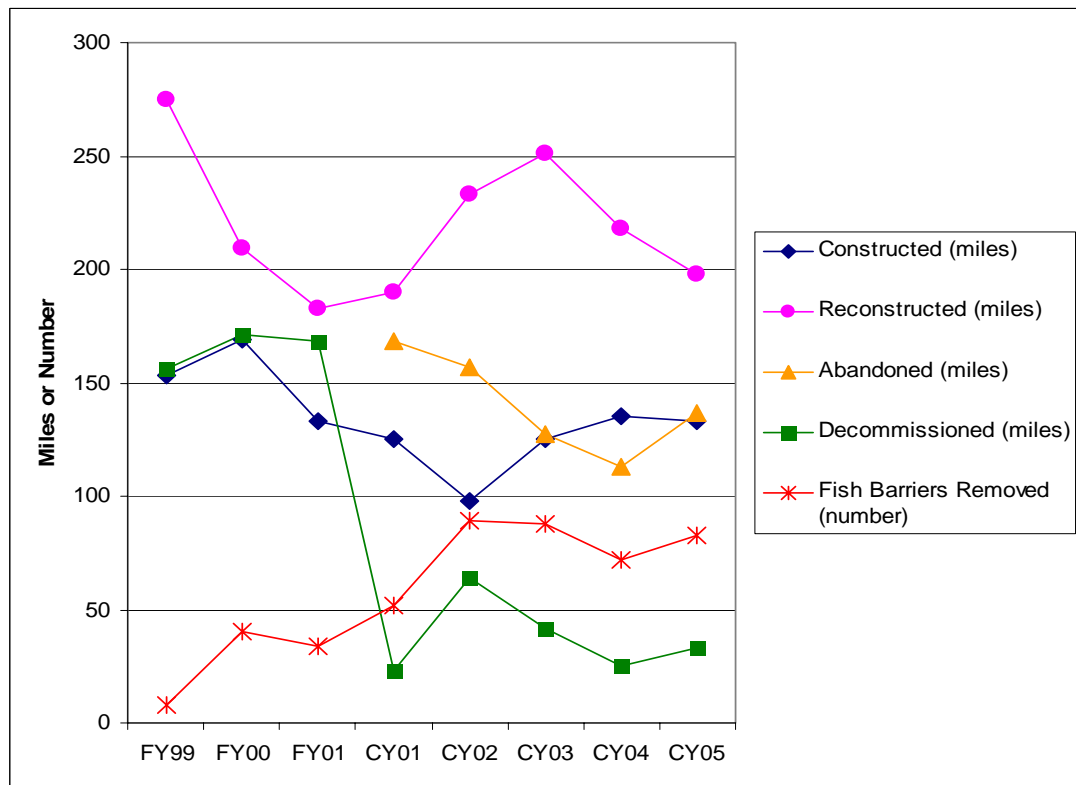
<sup>1</sup>For CY 2005, Total Road Miles means ordinary forest maintenance miles on HCP-managed lands and is determined from RMAP assessments. It excludes roads that lead only to recreation sites and those that are contained in Natural Area Preserves (NAPs) or Natural Resource Conservation Areas (NRCAs), as those are not considered forest roads. Data for NAP/NRCA roads are in Table 5.2; data for recreation roads are not yet available.

<sup>2</sup>Due to a change in reporting methods, 7 year mean data comes from fiscal years 1999 through 2001 and calendar years 2001 through 2004. Calendar year 2001 included data from the last 6 months of fiscal year 2001.

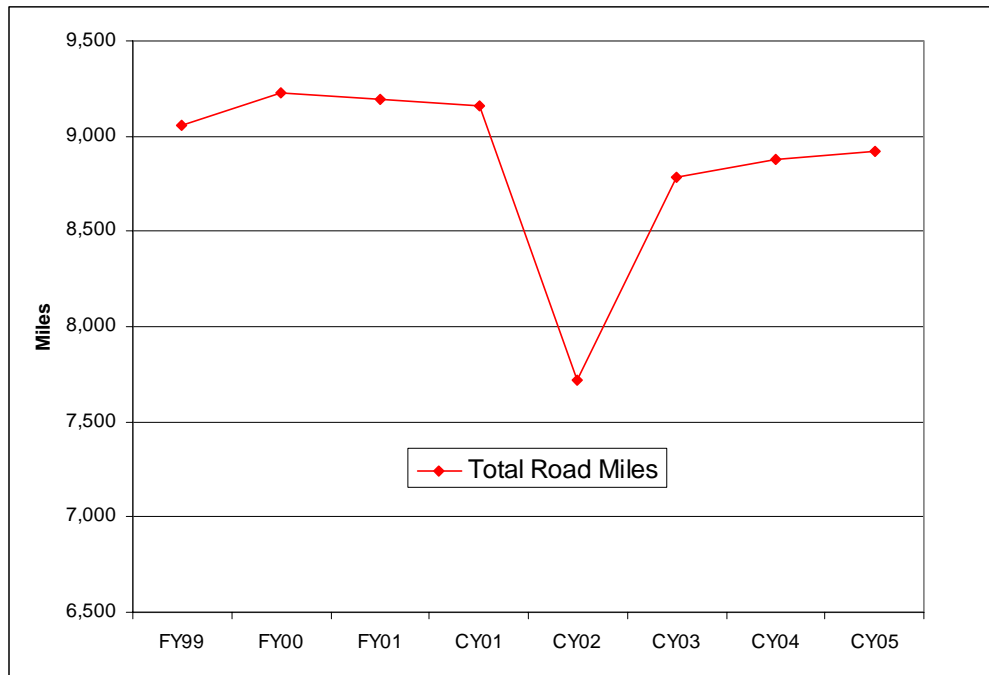
<sup>3</sup>These data are only for calendar years 2001 through 2004. Data were not available in prior years.



**Figure 5.1.** Road management activities: calendar year 2005 totals vs. means for fiscal year 1999 through calendar year 2004



**Figure 5.2.** Road management activities: fiscal year 1999 through calendar year 2005



**Figure 5.3.** Total road miles in HCP planning units: fiscal year 1999 through calendar year 2005

In calendar year 2005, DNR began tracking forest roads separately from roads not used for forest practices purposes. Specifically, non-forest practice roads are those that lead only to a recreation site and those that are contained entirely within Natural Area Preserves (NAPs) and Natural Resource Conservation Areas (NRCAs). DNR was not able to distinguish between these road types in prior annual reports, so all three were included in the reported total road miles. By making this distinction, DNR is able to increase the accuracy and detail of reporting for RMAPs, while still tracking and reporting on all road miles. Roads in NAPs and NRCAs are reported in Table 5.2. Data for recreation roads are still being processed and verified and should be available in the 2007 annual report.

**Table 5.2.** Miles of roads contained entirely within Natural Area Preserves (NAPs) or Natural Resource Conservation Areas (NRCAs)

Road Type	Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima
RMAP <sup>1</sup>	4.90	10.12	4.37	48.70	6.47	74.81	5.35	0.94	0
Non-RMAP <sup>2</sup>	0	1.24	0	3.90	0	1.07	0.90	0	0
<b>Total Miles</b>	<b>4.90</b>	<b>11.36</b>	<b>4.37</b>	<b>52.60</b>	<b>6.47</b>	<b>75.88</b>	<b>6.25</b>	<b>0.94</b>	<b>0</b>

<sup>1</sup>RMAP roads are those that fall under the legal requirements for road maintenance and abandonment planning.

<sup>2</sup>Non-RMAP roads are those that were never used for timber haul (non-forest roads) and are therefore exempt from RMAP requirements.

Unlike other activities, road management activities are reported on a calendar (rather than fiscal) year basis. This reflects the requirements by Forest Practices for road management activities and maintenance schedules to be reported on a calendar year basis.

To obtain the base numbers of road miles, DNR used photo interpretation augmented with Global Positioning System (GPS). This became the basis of the mapped corporate transportation data layer in the DNR GIS system. Since then, department employees have been verifying the presence or absence of these mapped road arcs as they complete RMAPs. As the percentage of roads covered by RMAP assessments increases, DNR's confidence in actual active forest road miles also increases.

### **Road Use Permits and Easements**

Beginning in 2005, road-related activities associated with easements and road use permits have been included in the HCP Annual Report. These "footprints", which were granted by DNR to private entities in order to allow the private entities to gain access to their lands, are detailed in Table 5.3.

**Table 5.3.** Road easements and road use permits granted in calendar year 2005

Planning Unit	Length of New Road Construction (Miles)	Area of New Road Construction (Acres)	Length of Timber Harvest (Miles)	Area of Timber Harvest (Acres)
North Puget	0.15	0.55	4.50	16.35
OESF	0.09	0.42	0	0
South Coast	0.07	0.08	0	0
Straits	0.30	1.80	0	0
Totals	0.61	2.85	4.50	16.35



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## 6. Land Transactions

DNR has a transactions program designed to reposition trust lands for better long-term management and increased revenue for each of the state trusts. Through this program, DNR looks for opportunities to divest the trusts of lands not appropriate for revenue production. Such lands are often better suited to other public benefits, such as parks or habitat for rare native species. DNR also looks to consolidate its forest landscapes, which allows for more cost-effective management and offers opportunities to optimize trust revenue while maintaining habitat and allowing public recreation as appropriate.

Land transactions affect the amount of habitat or potential habitat on DNR-managed forested state lands. Transactions may be carried out to consolidate forested state ownership in certain areas, often by trading with owners of adjacent lands for scattered DNR-managed parcels elsewhere. State trust lands also may be transferred out of trust ownership into protected status as Natural Area Preserves (NAPs) or Natural Resource Conservation Areas (NRCAs). DNR-managed NAPs and NRCAs are selected to protect high-quality examples of native ecosystems and rare species as well as important natural features. Another option is for trust lands to be transferred to other government agencies to be used as parks or open space or for public facilities. When this happens, the trust is compensated at fair market value, and replacement properties are acquired to maintain trust assets over time.

During this reporting period, DNR focused much of its transaction activity in Eastern Washington. These transactions impacted five planning units, with the most sizeable acreage acquired in the North Puget Planning Unit as a result of the Blue Mountains land exchange. A total of 5,816 acres were added to the HCP permit lands and 1,271 acres were disposed in fiscal year 2006. Table 6.1 details the fiscal year 2006 transactions, including their effects on various types of habitat, streams, and forests. Cumulative changes from 1997 through fiscal year 2006 are detailed in Table 6.2.

Briefly, the transactions for fiscal year 2006 can be described as follows:

### **Chelan Planning Unit**

*Acquired:* None

*Disposed:* None

### **Columbia Planning Unit**

*Acquired:* 573 acres of forestland designated “no role” for spotted owls (meaning it is not designated as either NRF or dispersal/DFC). Of that, 15 acres are included in a NAP.

*Disposed:* 3 acres transferred to resolve trespasses. These properties are in no role areas.

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### **North Puget Planning Unit**

*Acquired:* 5,177 acres of forestland designated no role. The majority of this acreage is in two forest blocks in Skagit and Snohomish counties. Two parcels totaling 105 acres are additions to NRCAs.

*Disposed:* 1,020 acres designated no role for spotted owls. The majority of the acreage is in developing areas that are no longer suitable for forest management. San Juan County purchased 40 acres for a park.

### **Klickitat Planning Unit**

*Acquired:* None.

*Disposed:* 208 acres of forestland in four parcels. Three parcels (totaling 188 acres) are designated Desired Future Condition/no role management area. One parcel (20 acres) is designated Desired Future Condition, which is equivalent to dispersal under HCP Amendment No. 1. The timber on that parcel is more than 70 years old.

### **South Coast Planning Unit**

*Acquired:* None

*Disposed:* None

### **South Puget Planning Unit**

*Acquired:* 66 acres, the majority of which is NAP/NRCA property. One 20-acre forest in-holding in Mason County was acquired. All the properties are designated no role for spotted owls.

*Disposed:* 40 acres to the Auburn School District. This parcel is in a developing area and is designated no role for spotted owls.

### **Straits Planning Unit**

*Acquired:* None

*Disposed:* None

### **Yakima Planning Unit**

*Acquired:* The second half of a land exchange begun in the previous reporting period concluded in fiscal year 2006. The properties traded by the state are included in the Klickitat summary above. The acquired parcels are in-holdings in the Ahtanum Multiple Use Area which is now completely within the Yakima Planning Unit. The two acquired sections (1,280 acres) have not been designated under the HCP at this time, pending the expected review of habitat designations within the Yakima Planning Unit.

*Disposed:* None



**Table 6.1. Effects of transactions on permit lands: July 2005 through June 2006**

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
	Total Acres Acquired	-	572.98	-	5,176.59	-	-	66.42	-	-	5,815.99
	Total Acres Disposed	-	(2.86)	(207.53)	(1,020.23)	-	-	(40.00)	-	-	(1,270.62)
	Net Change	-	570.12	(207.53)	4,156.36	-	-	26.42	-	-	4,545.37
Owl Habitat Acquired	Designated Dispersal	-	-	-	-	-	-	-	-	-	-
	Existing Dispersal (41+)	-	-	-	-	-	-	-	-	-	-
	Designated DFC	-	-	-	-	-	-	-	-	-	-
	Existing DFC	-	-	-	-	-	-	-	-	-	-
	Designated NRF	-	-	-	-	-	-	-	-	-	-
	Existing NRF (71+)	-	-	-	-	-	-	-	-	-	-
	OESF	-	-	-	-	-	-	-	-	-	-
	No Role	-	572.98	-	5,176.59	-	-	66.42	-	-	5,815.99
										5,815.99	
Owl Habitat Disposed	Designated Dispersal	-	-	-	-	-	-	-	-	-	-
	Existing Dispersal (41+)	-	-	-	-	-	-	-	-	-	-
	Designated DFC	-	-	(19.97)	-	-	-	-	-	-	(19.97)
	Existing DFC	-	-	(19.97)	-	-	-	-	-	-	(19.97)
	Designated NRF	-	-	-	-	-	-	-	-	-	-
	Existing NRF (71+)	-	-	-	-	-	-	-	-	-	-
	OESF	-	-	-	-	-	-	-	-	-	-
	No Role	-	(2.86)	(187.56)	(1,020.23)	-	-	(40.00)	-	-	(1,250.65)
										(1,270.62)	
Other Habitats Acquired	Murrelet	-	-	-	-	-	-	-	-	-	-
	Oregon silverspot butterfly	-	-	-	-	-	-	-	-	-	-
	Aleutian Canadian goose	-	-	-	-	-	-	-	-	-	-
	Bald eagle	-	-	-	-	-	-	-	-	-	-
	Peregrine falcon	-	-	-	-	-	-	-	-	-	-
	Gray wolf	-	-	-	-	-	-	-	-	-	-
	Grizzly bear	-	-	-	-	-	-	-	-	-	-
	Columbia white-tailed deer	-	-	-	-	-	-	-	-	-	-
	Talus and cliffs	-	-	-	-	-	-	-	-	-	-
	Meadows	-	-	-	-	-	-	-	-	-	-
Other Habitats Disposed	Murrelet	-	-	-	-	-	-	-	-	-	-
	Oregon silverspot butterfly	-	-	-	-	-	-	-	-	-	-

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
Other Habitats Disposed (Continued)	Aleutian Canadian goose	-	-	-	-	-	-	-	-	-	-
	Bald eagle	-	-	-	-	-	-	-	-	-	-
	Peregrine falcon	-	-	-	-	-	-	-	-	-	-
	Gray wolf	-	-	-	-	-	-	-	-	-	-
	Grizzly bear	-	-	-	-	-	-	-	-	-	-
	Columbia white-tailed deer	-	-	-	-	-	-	-	-	-	-
	Talus and cliffs	-	-	-	-	-	-	-	-	-	-
	Meadows	-	-	-	-	-	-	-	-	-	-
Riparian: Stream Miles Acquired	Stream type 1	-	0.29	-	4.21	-	-	-	-	-	4.50
	Stream type 2	-	-	-	0.07	-	-	-	-	-	0.07
	Stream type 3	-	0.19	-	8.67	-	-	0.26	-	-	9.12
	Stream type 4	-	0.05	-	9.36	-	-	0.12	-	-	9.53
	Stream type 5	-	2.17	-	5.95	-	-	-	-	-	8.12
	Stream type 9	-	5.32	-	12.67	-	-	-	-	-	17.99
	<b>Total Miles</b>	-	<b>8.02</b>	-	<b>27.98</b>	-	-	<b>0.38</b>	-	-	<b>36.38</b>
ROS/Slopes Acquired	Rain on Snow	-	-	-	1.93	-	-	-	-	-	1.93
	Unstable Slopes	-	-	-	488.42	-	-	-	-	-	488.42
Riparian: Stream Miles Disposed	Stream type 1	-	-	-	0.18	-	-	-	-	-	0.18
	Stream type 2	-	-	-	0.42	-	-	-	-	-	0.42
	Stream type 3	-	-	-	0.71	-	-	-	-	-	0.71
	Stream type 4	-	-	0.09	2.05	-	-	-	-	-	2.14
	Stream type 5	-	0.01	0.07	1.13	-	-	-	-	-	1.21
	Stream type 9	-	0.02	0.58	0.17	-	-	-	-	-	0.77
<b>Total Miles</b>	-	<b>0.03</b>	<b>0.74</b>	<b>4.66</b>	-	-	-	-	-	<b>5.43</b>	
ROS/Slopes Disposed	Rain on Snow	-	-	-	-	-	-	-	-	-	-
	Unstable Slopes	-	-	-	19.61	-	-	8.90	-	-	28.51
Zones Acquired	Puget Sound Douglas Fir	-	-	-	-	-	-	51.07	-	-	51.07
	Silver Fir	-	-	-	35.96	-	-	-	-	-	35.96
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	Western Hemlock	-	572.98	-	5,045.88	-	-	15.35	-	-	5,634.21
	Woodland/Prairie Mosaic	-	-	-	94.75	-	-	-	-	-	94.75
	<b>Total Acres</b>	-	<b>572.98</b>	-	<b>5,176.59</b>	-	-	<b>66.42</b>	-	-	-
Zones Disposed	Woodland/Prairie Mosaic	-	-	-	(43.23)	-	-	-	-	-	(43.23)
	Western Hemlock	-	(2.86)	-	(400.00)	-	-	(1.00)	-	-	(403.86)
	Central Arid Steppe	-	-	-	-	-	-	-	-	-	-
	Ponderosa Pine	-	-	-	-	-	-	-	-	-	-
	Interior Douglas Fir	-	-	(19.97)	-	-	-	-	-	-	(19.97)
	Oak	-	-	(187.56)	-	-	-	-	-	-	(187.56)
	PS Douglas Fir	-	-	-	(577.00)	-	-	(39.00)	-	-	(616.00)

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
<i>Zones Disposed (Continued)</i>	Grand Fir	-	-	-	-	-	-	-	-	-	-
	Interior Western Hemlock	-	-	-	-	-	-	-	-	-	-
	<b>Total Acres</b>	-	<i>(2.86)</i>	<i>(207.53)</i>	<i>(1,020.23)</i>	-	-	<i>(40.00)</i>	-	-	<i>(1,270.62)</i>
Age Class Acquired	Open 0-10	-	128.50	-	445.60	-	-	15.00	-	-	589.10
	Regeneration 11-20	-	318.00	-	2,728.17	-	-	-	-	-	3,046.17
	Pole 21-40	-	76.00	-	838.10	-	-	9.00	-	-	923.10
	Closed 41-70	-	15.48	-	160.56	-	-	5.00	-	-	181.04
	Complex 71-100	-	-	-	767.00	-	-	21.65	-	-	788.65
	Complex 101-150	-	-	-	50.30	-	-	-	-	-	50.30
	Functional 150+	-	-	-	-	-	-	-	-	-	-
	Non-Forest Land	-	35.00	-	186.86	-	-	15.77	-	-	237.63
		<b>Total Acres</b>	-	<b>572.98</b>	-	<b>5,176.59</b>	-	-	<b>66.42</b>	-	-
Age Class Disposed	<i>Open 0-10</i>	-	-	<i>(167.15)</i>	<i>(180.00)</i>	-	-	-	-	-	-
	<i>Regeneration 11-20</i>	-	-	-	<i>(222.56)</i>	-	-	-	-	-	<i>(222.56)</i>
	<i>Pole 21-40</i>	-	<i>(0.19)</i>	-	<i>(254.44)</i>	-	-	-	-	-	<i>(254.63)</i>
	<i>Closed 41-70</i>	-	<i>(0.52)</i>	-	<i>(38.00)</i>	-	-	<i>(38.84)</i>	-	-	<i>(77.36)</i>
	<i>Complex 71-100</i>	-	<i>(2.15)</i>	<i>(19.97)</i>	<i>(276.31)</i>	-	-	-	-	-	<i>(298.43)</i>
	<i>Complex 101-150</i>	-	-	<i>(20.41)</i>	<i>(48.92)</i>	-	-	-	-	-	<i>(69.33)</i>
	<i>Functional 150+</i>	-	-	-	-	-	-	-	-	-	-
	<i>Non-Forest Land</i>	-	-	-	-	-	-	<i>(1.16)</i>	-	-	<i>(1.16)</i>
		<b>Total Acres</b>	-	<i>(2.86)</i>	<i>(207.53)</i>	<i>(1,020.23)</i>	-	-	<i>(40.00)</i>	-	-
Age Class by Zone Acquired	<b>Open 0-10</b>										
	Western Hemlock	-	128.50	-	499.60	-	-	-	-	-	628.10
	Puget Sound Doug Fir	-	-	-	-	-	-	15.00	-	-	-
	Silver Fir	-	-	-	14.96	-	-	-	-	-	14.96
	<b>Regeneration 11-20</b>										
	Western Hemlock	-	318.00	-	2,760.06	-	-	-	-	-	3,078.06
	Silver Fir	-	-	-	11.00	-	-	-	-	-	-
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	<b>Pole 21-40</b>										
	Western Hemlock	-	76.00	-	838.10	-	-	-	-	-	914.10
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	Puget Sound Doug Fir	-	-	-	-	-	-	9.00	-	-	9.00
	<b>Closed 41-70</b>										
	Western Hemlock	-	15.48	-	21.60	-	-	-	-	-	37.08
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	Puget Sound Doug Fir	-	-	-	-	-	-	5.00	-	-	5.00
	Woodland Pr Mosaic	-	-	-	55.00	-	-	-	-	-	-
	<b>Complex 71-100</b>										
	Western Hemlock	-	-	-	739.00	-	-	15.35	-	-	754.35

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
Age Class by Zone Acquired (Continued)	Puget Sound Doug Fir							6.30			
	Willamette Valley	-	-	-	-	-	-	-	-	-	-
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	<b>Complex 101-150</b>										
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	Western Hemlock				50.30						
	<b>Functional 150</b>		-						-		
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	<b>Non-Forest Land</b>										
	Western Hemlock	-	35.00	-	137.22	-	-	-	-	-	172.22
	Sitka Spruce	-	-	-	-	-	-	-	-	-	-
	Silver Fir				10.00						10.00
	Woodland Pr/Mosaic				39.75						39.75
	Willamette Valley	-	-	-	-	-	-	-	-	-	-
	Puget Sound Doug Fir	-	-	-	-	-	-	15.77	-	-	15.77
	<b>Total Acres</b>	-	<b>572.98</b>	-	<b>5,176.59</b>	-	-	<b>66.42</b>	-	-	<b>5,815.99</b>
Age class by Zone Disposed	<b>Open 0-10</b>										
	Oak	-	-	(167.15)	-	-	-	-	-	-	(167.15)
	Puget Sound Doug Fir				(3.00)						(3.00)
	Western Hemlock				(177.00)						(177.00)
	<b>Regeneration 11-20</b>										
	Puget Sound Doug Fir	-	-	-	(191.56)	-	-	-	-	-	(191.56)
	Western Hemlock				(31.00)						(31.00)
	Grand Fir	-	-	-	-	-	-	-	-	-	-
	<b>Pole 21-40</b>										
	Western Hemlock		(0.19)								(0.19)
	Interior Doug Fir	-	-	-	-	-	-	-	-	-	-
	Oak	-	-	-	-	-	-	-	-	-	-
	Puget Sound Doug Fir	-	-	-	(254.44)	-	-	-	-	-	(254.44)
	Int Western Hemlock	-	-	-	-	-	-	-	-	-	-
	<b>Closed 41-70</b>										
	Western Hemlock	-	(0.52)	-	(38.00)	-	-	(1.00)	-	-	(39.52)
	Interior Doug Fir	-	-	-	-	-	-	-	-	-	-
	Oak	-	-	-	-	-	-	-	-	-	-
	Puget Sound Doug Fir	-	-	-	-	-	-	(37.84)	-	-	(37.84)
	Grand Fir	-	-	-	-	-	-	-	-	-	-
Int Western Hemlock	-	-	-	-	-	-	-	-	-	-	
<b>Complex 71-100</b>											
Western Hemlock	-	(2.15)	-	(154.00)	-	-	-	-	-	(156.15)	

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
Age Class by Zone	Woodland/Pr. Mosaic	-	-	-	(31.31)		-	-	-	-	(31.31)
	Oak	-	-	-			-	-	-	-	-
Disposed (Continued)	Puget Sound Doug Fir	-	-	-	(91.00)		-	-	-	-	(91.00)
	Grand Fir	-	-	-			-	-	-	-	-
	Int Western Hemlock	-	-	-			-	-	-	-	-
	Interior Doug Fir	-	-	(19.97)			-	-	-	-	(19.97)
	<b>Complex 101-150</b>										
	Western Hemlock	-	-	-			-	-	-	-	-
	Oak	-	-	(20.41)			-	-	-	-	(20.41)
	Puget Sound Doug Fir	-	-	-	(37.00)		-	-	-	-	(37.00)
	Woodland/Pr. Mosaic	-	-	-	(11.92)		-	-	-	-	(11.92)
	Grand Fir	-	-	-			-	-	-	-	-
	<b>Functional 150</b>										
	Oak	-	-	-			-	-	-	-	-
	Woodland/Pr. Mosaic	-	-	-			-	-	-	-	-
	<b>Non-Forest Land</b>										
	Western Hemlock	-	-	-			-	-	-	-	-
	Grand Fir	-	-	-			-	-	-	-	-
	Central Arid Steppe	-	-	-			-	-	-	-	-
	Ponderosa Pine	-	-	-			-	-	-	-	-
	Oak	-	-	-			-	-	-	-	-
	Woodland/Pr. Mosaic	-	-	-			-	-	-	-	-
	Puget Sound Doug Fir	-	-	-			-	(1.16)	-	-	(1.16)
	Int Western Hemlock	-	-	-			-	-	-	-	-
	<b>Total Acres</b>	-	(2.86)	(207.53)	(1,020.23)		-	(40.00)	-	-	(1,270.62)

Note: totals may not add due to rounding.

**Table 6.2. Effects of transactions on permit lands: January 1997 through June 2006**

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
	<b>Total Acres Acquired</b>	403.57	6,571.48	1,234.65	17,780.41	3,180.59	4,733.58	10,549.27	1,222.72	39.15	45,715.42
	<b>Total Acres Disposed</b>	(640.00)	(10,514.84)	(1,396.20)	(6,074.73)	(838.24)	(2,605.91)	(6,317.41)	(206.45)	(1,114.84)	(29,708.62)
	<b>Net Change - Acres</b>	(236.43)	(3,943.36)	(161.55)	11,705.68	2,342.35	2,127.67	4,231.86	1,016.27	(1,075.69)	16,006.80
Owl Habitat Acquired	Designated Dispersal	-	-	232.20	10.00	-	-	7,346.73	-	-	7,588.93

Activity		Planning Unit									
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	Totals
Owl Habitat Acquired (Continued)	Existing Dispersal (41+)	-	-	230.00	10.00	-	-	3,279.46	-	-	3,519.46
	Designated NRF	203.57	380.00	1,002.45	2,076.24	-	-	-	-	-	3,662.26
	Existing NRF (71+)	-	17.39	146.00	-	-	-	-	-	-	163.39
	OESF	-	-	-	-	3,180.59	-	-	-	-	3,180.59
	No Role	200.00	6,191.48	-	15,694.17	-	4,733.58	3,202.54	1,222.72	39.15	31,283.64
											45,715.42
Owl Habitat Disposed	Designated Dispersal	-	(6,754.57)	-	(734.36)	-	-	(660.00)	-	(1,084.35)	(9,233.28)
	Existing Dispersal (41+)	-	(2,325.82)	-	(109.00)	-	-	(131.90)	-	(844.07)	(3,410.79)
	Designated DFC	-	-	(19.97)	-	-	-	-	-	-	(19.97)
	Existing DFC	-	-	(19.97)	-	-	-	-	-	-	(19.97)
	Designated NRF	-	(1,284.53)	-	(126.55)	-	-	-	-	-	(1,411.08)
	Existing NRF (71+)	-	(389.49)	-	-	-	-	-	-	-	(389.49)
	OESF	-	-	-	-	(838.24)	-	-	-	-	(838.24)
	No Role	(640.00)	(2,475.74)	(1,376.23)	(5,213.82)	-	(2,605.91)	(5,657.41)	(206.45)	(30.49)	(18,206.05)
											(29,708.62)
Other Habitats Acquired	Murrelet	-	-	-	-	-	-	-	-	-	-
	Oregon silverspot butterfly	-	-	-	-	-	-	-	-	-	-
	Aleutian Canadian goose	-	-	-	-	-	-	-	-	-	-
	Bald eagle	-	-	-	20.00	-	-	-	-	-	20.00
	Peregrine falcon	-	-	-	-	-	-	-	-	-	-
	Gray wolf	-	-	-	-	-	-	-	-	-	-
	Grizzly bear	-	-	-	-	-	-	-	-	-	-
	Columbia white-tailed deer	-	-	-	-	-	-	-	-	-	-
	Talus and cliffs	-	-	-	325.00	-	-	-	-	-	325.00
	Meadows	102.50	-	70.45	-	-	-	-	-	-	172.95
Other Habitats Disposed	Murrelet	-	(567.61)	-	-	-	-	(279.91)	-	-	(847.52)
	Oregon silverspot butterfly	-	-	-	-	-	-	-	-	-	-
	Aleutian Canadian goose	-	-	-	-	-	-	-	-	-	-
	Bald eagle	-	(40.00)	-	(64.00)	(49.42)	-	-	-	-	(153.42)

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
<i>Other Habitats Disposed (Continued)</i>	<i>Peregrine falcon</i>	-	-	-	-	-	-	-	-	-	-
	<i>Gray wolf</i>	-	-	-	-	-	-	-	-	-	-
	<i>Grizzly bear</i>	-	-	-	-	-	-	-	-	-	-
	<i>Columbia white-tailed deer</i>	-	-	-	-	-	-	-	-	-	-
	<i>Talus and cliffs</i>	-	(87.00)	-	(20.00)	-	-	-	-	-	(107.00)
	<i>Meadows</i>	-	(82.00)	-	-	-	-	-	-	-	(82.00)
Riparian: Stream Miles Acquired	Stream type 1	-	2.70	3.70	20.63	0.32	9.23	3.05	-	-	39.63
	Stream type 2	-	-	1.12	1.88	1.02	0.91	0.36	-	-	5.29
	Stream type 3	-	8.84	1.01	20.46	7.24	7.89	9.35	-	-	54.79
	Stream type 4	0.96	10.40	-	25.34	2.25	6.72	10.82	0.31	-	56.80
	Stream type 5	2.47	41.33	0.82	35.98	8.99	13.14	36.14	4.41	-	143.28
	Stream type 9	4.47	45.60	3.42	39.28	4.85	24.77	12.71	2.83	0.25	138.18
	<b>Total Miles</b>	<b>7.90</b>	<b>108.87</b>	<b>10.07</b>	<b>143.57</b>	<b>24.67</b>	<b>62.66</b>	<b>72.43</b>	<b>7.55</b>	<b>0.25</b>	<b>437.97</b>
	ROS/Slopes Acquired	Rain on Snow	-	1,070.74	999.04	2,504.14	4.47	-	3,165.84	925.75	3.43
Unstable Slopes		23.10	840.40	-	1,543.03	1,137.10	288.67	104.84	923.77	-	4,860.91
Riparian Stream Miles Disposed	Stream type 1	-	(1.40)	-	(3.38)	(0.30)	(0.14)	(0.69)	-	-	(5.91)
	Stream type 2	-	-	-	(0.75)	-	(1.97)	(0.32)	-	(0.35)	(3.39)
	Stream type 3	-	(15.78)	-	(12.93)	(2.18)	(2.64)	(5.18)	(0.59)	-	(39.30)
	Stream type 4	(0.08)	(10.01)	(0.36)	(2.52)	(1.71)	(1.65)	(5.96)	(0.17)	(0.36)	(22.82)
	Stream type 5	(5.44)	(49.81)	(2.31)	(4.91)	(5.15)	(9.43)	(7.03)	(0.09)	(2.43)	(86.60)
	Stream type 9	(7.60)	(31.18)	(4.19)	(1.99)	-	(11.18)	(11.17)	(0.24)	(4.87)	(72.42)
	<b>Total Miles</b>	<b>(13.12)</b>	<b>(108.18)</b>	<b>(6.86)</b>	<b>(26.48)</b>	<b>(9.34)</b>	<b>(27.01)</b>	<b>(30.35)</b>	<b>(1.09)</b>	<b>(7.66)</b>	<b>(230.09)</b>
ROS/Slopes Disposed	Rain on Snow	(497.03)	(3,611.18)	(796.06)	(536.98)	(78.46)	-	(182.12)	-	(767.81)	(6,469.64)
	Unstable Slopes	-	(1,135.79)	-	(358.49)	(14.09)	(1.65)	(123.87)	-	-	(1,633.89)
Zones: Acquired	Interior Douglas Fir	203.57	-	360.70	-	-	-	-	-	-	564.27
	Olympic Douglas Fir	-	-	-	-	-	-	-	161.45	-	161.45
	Puget Sound Douglas Fir	-	-	-	202.17	-	-	1,861.48	0.75	-	2,064.40

Activity	Planning Unit										
	Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	Totals	
Zones: Acquired (Continued)	Silver Fir	-	-	-	1,299.25	-	-	39.32	-	-	1,338.57
	Sitka Spruce	-	-	-	-	389.08	1,988.16	-	-	-	2,377.24
	Western Hemlock	-	6,569.48	-	13,469.03	2,791.82	2,520.90	8,648.47	1,060.52	-	35,060.22
	Mt. Hemlock	-	-	-	2,597.04	-	-	-	-	-	2,597.04
	Oak	-	-	873.95	-	-	-	-	-	-	873.95
	Three-tip Sage	40.00	-	-	-	-	-	-	-	-	40.00
	Central Arid Steppe	120.00	-	-	-	-	-	-	-	-	120.00
	Ponderosa Pine	40.00	-	-	-	-	-	-	-	26.15	66.15
	Willamette Valley	-	2.00	-	-	-	-	-	-	-	2.00
	Woodland/Prairie Mosaic	-	-	-	212.92	-	224.52	-	-	13.00	450.44
<b>Total Acres</b>	<b>403.57</b>	<b>6,571.48</b>	<b>1,234.65</b>	<b>17,780.41</b>	<b>3,180.90</b>	<b>4,733.58</b>	<b>10,549.27</b>	<b>1,222.72</b>	<b>39.15</b>	<b>45,715.73</b>	
Zones: Disposed	Interior Douglas Fir	-	-	(332.50)	-	-	-	-	-	-	(332.50)
	Mountain Hemlock	-	-	-	(402.00)	-	-	-	-	-	(402.00)
	Puget Sound Douglas Fir	-	-	-	(1,662.95)	-	(148.71)	(3,417.66)	(80.00)	-	(5,309.32)
	Olympic Douglas Fir	-	-	-	-	-	-	-	(0.22)	-	(0.22)
	Silver Fir	-	(1,250.23)	-	(550.00)	-	-	(488.00)	-	-	(2,288.23)
	Sitka Spruce	-	-	-	-	(54.21)	(1,120.00)	-	-	-	(1,174.21)
	Western Hemlock	-	(8,982.61)	-	(3,346.93)	(784.03)	(926.77)	(1,850.75)	(85.61)	-	(15,976.70)
	Woodland/Prairie	-	-	-	(112.85)	-	-	(561.00)	(40.62)	-	(714.47)
	Willamette Valley	-	(242.00)	-	-	-	-	-	-	-	(242.00)
	Cowlitz River	-	(40.00)	-	-	-	(410.43)	-	-	-	(450.43)
	Central Arid Steppe	(615.00)	-	-	-	-	-	-	-	-	(615.00)
	Ponderosa Pine	(25.00)	-	-	-	-	-	-	-	-	(25.00)
	Oak	-	-	(1,063.70)	-	-	-	-	-	-	(1,063.70)
	Interior Western Hemlock	-	-	-	-	-	-	-	-	(480.00)	(480.00)
	Grand Fir	-	-	-	-	-	-	-	-	(634.84)	(634.84)
	<b>Total Acres</b>	<b>(640.00)</b>	<b>(10,514.84)</b>	<b>(1,396.20)</b>	<b>(6,074.73)</b>	<b>(838.24)</b>	<b>(2,605.91)</b>	<b>(6,317.41)</b>	<b>(206.45)</b>	<b>(1,114.84)</b>	<b>(29,708.62)</b>
	Age class Acquired	Open 0-10	97.50	3,950.00	184.65	3,307.20	216.28	1,762.10	2,725.00	273.45	-
Regeneration 11-20		-	320.00	14.90	5,252.74	509.64	568.61	1,224.41	-	-	7,890.30
Pole 21-40		0.50	751.00	-	1,669.50	1,541.00	245.30	1,990.12	-	-	6,197.42
Closed 41-70		2.57	1,393.78	89.10	4,760.46	633.50	1,072.37	3,332.23	903.72	-	12,187.73



Activity		Planning Unit									
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	Totals
Age Class Acquired (Continued)	Complex 71-100	-	43.59	324.00	1,120.57	113.30	265.60	619.14	-	-	2,486.20
	Complex 101-150	-	-	10.00	50.30	-	91.00	97.50	-	12.15	260.95
	Functional 150+	-	-	42.00	7.00	-	2.00	-	-	-	51.00
	Non-Forest Land	303.00	113.07	570.00	1,612.70	166.80	726.55	561.06	45.55	27.00	4,125.73
	<b>Total Acres</b>	<b>403.57</b>	<b>6,571.44</b>	<b>1,234.65</b>	<b>17,780.47</b>	<b>3,180.52</b>	<b>4,733.53</b>	<b>10,549.46</b>	<b>1,222.72</b>	<b>39.15</b>	<b>45,715.51</b>
Age class Disposed	Open 0-10	-	(2,048.90)	(225.00)	(740.01)	(42.21)	(655.25)	(608.24)	(2.00)	-	(4,321.61)
	Regeneration 11-20	-	(1,307.22)	-	(736.58)	-	(679.67)	(330.61)	-	(177.38)	(3,231.46)
	Pole 21-40	-	(2,027.69)	(143.85)	(765.54)	(207.35)	(304.60)	(357.50)	-	(63.49)	(3,870.02)
	Closed 41-70	-	(2,810.62)	(479.31)	(2,171.90)	(414.03)	(813.63)	(2,146.84)	(135.42)	(454.61)	(9,426.36)
	Complex 71-100	-	(565.35)	(467.62)	(983.97)	(140.95)	(33.00)	(1,451.06)	(36.40)	(237.65)	(3,916.00)
	Complex 101-150	-	(748.71)	(43.05)	(71.42)	-	-	(357.12)	(16.30)	(151.81)	(1,388.41)
	Functional 150+	-	(168.99)	(3.95)	(89.62)	-	-	(588.00)	-	-	(850.56)
	Non-Forest Land	(640.00)	(837.34)	(33.42)	(515.73)	(33.70)	(119.19)	(478.01)	(16.33)	(29.90)	(2,703.62)
	<b>Total Acres</b>	<b>(640.00)</b>	<b>(10,514.82)</b>	<b>(1,396.20)</b>	<b>(6,074.77)</b>	<b>(838.24)</b>	<b>(2,605.34)</b>	<b>(6,317.38)</b>	<b>(206.45)</b>	<b>(1,114.84)</b>	<b>(29,708.04)</b>
	Age class by Zone: Acquired	Open 0-10	-	-	-	-	-	-	-	-	-
Mt Hemlock		-	-	-	450.70	-	-	-	-	-	450.70
PS Douglas Fir		-	-	-	-	-	-	271.30	-	-	271.30
Interior Doug Fir		97.50	-	3.90	-	-	-	-	-	-	101.40
Olympic Doug Fir		-	-	-	-	-	-	-	161.45	-	161.45
Silver Fir		-	-	-	615.23	-	-	-	-	-	615.23
Sitka Spruce		-	-	-	-	77.69	290.20	-	-	-	367.89
Western Hemlock		-	3,950.00	-	2,317.18	138.92	1,423.46	2,453.77	128.00	-	10,411.33
Oak		-	-	180.75	-	-	-	-	-	-	180.75
Woodland Prairie Mosaic		-	-	-	-	-	48.52	-	-	-	48.52
Regeneration 11-20		-	-	-	-	-	-	-	-	-	-
PS Douglas Fir		-	-	-	-	-	-	296.49	-	-	296.49
Interior Doug Fir		-	-	3.40	-	-	-	-	-	-	3.40
Silver Fir		-	-	-	21.50	-	-	39.32	-	-	60.82
Sitka Spruce		-	-	-	-	60.96	279.31	-	-	-	340.27
Western Hemlock	-	320.00	-	4,970.63	448.71	182.30	888.60	-	-	6,810.24	
Mt Hemlock	-	-	-	320.50	-	-	-	-	-	320.50	

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
Age class by Zone: Acquired (Continued)	Oak	-	-	11.50	-	-	-	-	-	-	11.50
	Woodland Prairie Mosaic	-	-	-	-	-	107.00	-	-	-	107.00
	<b>Pole 21-40</b>										
	PS Douglas Fir	-	-	-	-	-	-	606.07	-	-	606.07
	Interior Doug Fir	0.50	-	-	-	-	-	-	-	-	0.50
	Silver Fir	-	-	-	103.71	-	-	-	-	-	103.71
	Sitka Spruce	-	-	-	-	142.66	161.32	9.00	-	-	312.98
	Western Hemlock	-	751.00	-	1,427.75	1,251.70	20.00	1,375.00	-	-	4,825.45
	Mt Hemlock	-	-	-	138.00	-	-	-	-	-	138.00
	Woodland Prairie Mosaic	-	-	-	-	-	-	64.00	-	-	64.00
	<b>Closed 41-70</b>										
	Mt Hemlock	-	15.48	-	1,074.00	-	-	-	-	-	1,089.48
	PS Douglas Fir	-	-	-	117.97	-	-	263.25	-	-	381.22
	Interior Doug Fir	2.57	-	4.00	-	-	-	-	-	-	6.57
	Silver Fir	-	-	-	428.16	-	-	-	-	-	428.16
	Sitka Spruce	-	-	-	-	52.54	729.37	-	-	-	781.91
	Western Hemlock	-	1,378.34	-	2,872.63	729.40	338.00	3,068.99	907.72	-	9,295.08
	Oak	-	-	85.10	-	-	-	-	-	-	85.10
	Woodland Prairie Mosaic	-	-	-	159.77	-	-	5.00	-	-	164.77
	<b>Complex 71-100</b>										
	Silver Fir	-	-	-	47.97	-	-	-	-	-	47.97
PS Douglas Fir	-	-	-	58.00	-	-	70.23	-	-	128.23	
Interior Doug Fir	-	-	212.20	-	-	-	-	-	-	212.20	
Sitka Spruce	-	-	-	-	49.97	265.60	-	-	-	315.57	
Western Hemlock	-	41.89	-	856.60	61.47	-	548.91	-	-	1,508.87	
Mt Hemlock	-	-	-	130.00	-	-	-	-	-	130.00	
Oak	-	-	111.80	-	-	-	-	-	-	111.80	
Willamette Valley	-	1.80	-	-	-	-	-	-	-	-	
<b>Complex 101-150</b>											
Western Hemlock	-	-	-	50.30	-	-	97.50	-	-	147.80	
Oak	-	-	10.00	-	-	-	-	-	-	10.00	
Central Arid Steppe	-	-	-	-	-	-	-	-	8.15	8.15	

Activity		Planning Unit									Totals
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	
Age class by Zone: Acquired (Continued)	Ponderosa Pine	-	-	-	-	-	-	-	-	4.00	4.00
	Sitka Spruce	-	-	-	-	-	91.00	-	-	-	-
	<b>Functional 150+</b>										
	Interior Douglas Fir	-	-	42.00	-	-	-	-	-	-	42.00
	Western Hemlock	-	-	-	7.00	-	-	-	-	-	7.00
	Sitka Spruce	-	-	-	-	-	2.00	-	-	-	-
	<b>Non-Forest Land</b>										
	Mt Hemlock	-	-	-	505.44	-	-	-	-	-	505.44
	PS Douglas Fir	-	-	-	26.20	-	-	345.36	0.75	-	372.31
	Interior Doug Fir	103.00	-	95.20	-	-	-	-	-	-	198.20
	Silver Fir	-	-	-	82.68	-	-	-	-	-	82.68
	Sitka Spruce	-	-	-	-	5.26	169.41	-	-	-	174.67
	Western Hemlock	-	112.77	-	945.34	161.62	557.14	215.70	24.80	-	2,017.37
	Oak	-	-	474.80	-	-	-	-	-	-	474.80
	Three-tip Sage	40.00	-	-	-	-	-	-	-	-	40.00
	Central Arid Steppe	120.00	-	-	-	-	-	-	-	18.00	138.00
	Ponderosa Pine	40.00	-	-	-	-	-	-	-	9.00	49.00
	Woodland Prairie Mos.	-	-	-	53.15	-	-	-	-	-	53.15
	Willamette Valley	-	0.20	-	-	-	-	-	-	-	0.20
	<b>Total Acres</b>	<b>403.57</b>	<b>6,571.48</b>	<b>1,234.65</b>	<b>17,780.41</b>	<b>3,180.90</b>	<b>4,733.63</b>	<b>10,549.49</b>	<b>1,222.72</b>	<b>39.15</b>	<b>45,716.00</b>
Age class by Zone: Disposed	<b>Open 0-10</b>										
	PS Douglas Fir	-	-	-	(106.84)	-	(39.15)	(222.29)	(2.70)	-	(370.98)
	Silver Fir	-	(169.90)	-	-	(42.21)	-	(191.70)	-	-	(403.81)
	Western Hemlock	-	(1,878.95)	-	(698.07)	-	(438.10)	(33.55)	(2.00)	-	(3,050.67)
	Mt Hemlock	-	-	-	(56.00)	-	-	-	-	-	(56.00)
	Cowlitz River	-	-	-	-	-	(178.00)	-	-	-	(178.00)
	Woodland Prairie Mos.	-	-	-	-	-	-	(160.70)	-	-	(160.70)
	Oak	-	-	(225.00)	-	-	-	-	-	-	(225.00)
	<b>Regeneration 11-20</b>										
	PS Douglas Fir	-	-	-	(256.56)	-	-	(189.40)	(2.70)	-	(448.66)
	Silver Fir	-	(239.50)	-	(11.88)	-	-	(115.70)	-	-	(367.08)
	Sitka Spruce	-	-	-	-	-	(339.00)	-	-	-	(339.00)
	Western Hemlock	-	(1,067.72)	-	(159.14)	-	(340.67)	(25.51)	-	-	(1,593.04)


Activity	Planning Unit									
	Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	Totals
Age Class by Zone Disposed (Continued)	Mt Hemlock	-	-	(56.00)	-	-	-	-	-	(56.00)
	Grand Fir	-	-	-	-	-	-	-	(177.38)	(177.38)
	<b>Pole 21-40</b>									
	PS Douglas Fir	-	-	(347.90)	-	-	(303.20)	(2.60)	-	(653.70)
	Silver Fir	(277.62)	-	(59.11)	-	-	(12.10)	-	-	(348.83)
	Sitka Spruce	-	-	-	-	(169.20)	-	-	-	(169.20)
	Western Hemlock	(1,742.12)	-	(423.60)	(207.35)	(65.41)	(33.20)	-	-	(2,471.68)
	Mt Hemlock	-	-	(57.00)	-	-	-	-	-	(57.00)
	Cowlitz River	(8.00)	-	-	-	(70.00)	-	-	-	(78.00)
	Woodland Prairie Mosaic	-	-	-	-	-	(9.00)	-	-	(9.00)
	Interior Douglas Fir	-	-	(37.69)	-	-	-	-	-	(37.69)
	Oak	-	-	(106.15)	-	-	-	-	-	(106.15)
	Int Western Hemlock	-	-	-	-	-	-	(63.49)	-	(63.49)
	<b>Closed 41-70</b>									
	Mt Hemlock	-	-	(230.00)	-	-	-	-	-	(230.00)
	PS Douglas Fir	-	-	(83.43)	-	(83.00)	(1,139.33)	(72.00)	-	(1,377.76)
	Silver Fir	(47.82)	-	(450.00)	-	-	(33.70)	-	-	(531.52)
	Sitka Spruce	-	-	-	-	(596.30)	-	-	-	(596.30)
	Western Hemlock	(2,762.82)	-	(1,420.46)	(414.03)	(20.00)	(621.30)	(14.80)	-	(5,253.41)
	Woodland Prairie Mosaic	-	-	-	-	-	(352.80)	(40.62)	-	(393.42)
	Cowlitz River	-	-	-	-	(114.33)	-	-	-	(114.33)
	Interior Douglas Fir	-	-	(148.57)	-	-	-	-	-	(148.57)
	Oak	-	-	(330.74)	-	-	-	-	-	(330.74)
	Grand Fir	-	-	-	-	-	-	-	(272.55)	(272.55)
	Int Western Hemlock	-	-	-	-	-	-	(182.06)	-	(182.06)
	<b>Complex 71-100</b>									
	PS Douglas Fir	-	-	(457.16)	-	-	(623.28)	-	-	(1,080.44)
	Silver Fir	-	-	(1.70)	-	-	-	-	-	(1.70)
	Western Hemlock	(539.85)	-	(287.30)	(140.95)	(33.00)	(826.92)	(36.40)	-	(1,864.42)
	Cowlitz River	(25.50)	-	-	-	-	-	-	-	(25.50)
	Oak	-	-	(321.38)	-	-	-	-	-	(321.38)
	Interior Douglas Fir	-	-	(146.24)	-	-	-	-	-	(146.24)
	Woodland Prairie Mosaic	-	-	-	-	-	-	-	-	(51.31)

Activity		Planning Unit									
		Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	Totals
Age Class by Zone: Disposed (Continued)	Grand Fir									(9.40)	(9.40)
	Int Western Hemlock									(228.25)	(228.25)
	<b>Complex 101-150</b>										
	PS Douglas Fir	-	-	-	(255.00)	-	-	(46.10)	-	-	(301.10)
	Silver Fir	-	(345.50)	-	(1.70)	-	-	(123.70)	-	-	(470.90)
	Western Hemlock	-	(403.21)	-	(3.30)	-	-	(187.15)	(16.30)	-	(609.96)
	Woodland/Pr Mosaic				(11.92)						(11.92)
	Oak			(43.06)							(43.06)
	Grand Fir								(151.81)		(151.81)
	<b>Functional 150+</b>										
	PS Douglas Fir	-	-	-	-	-	-	(588.00)	-	-	(588.00)
	Silver Fir	-	(131.49)	-	(1.00)	-	-	-	-	-	(132.49)
	Western Hemlock	-	(37.50)	-	(58.00)	-	-	-	-	-	(95.50)
	Oak			(3.95)							(3.95)
	Woodland Prairie Mosaic				(30.62)						(30.62)
	<b>Non-Forest Land</b>										
	Mt Hemlock	-	-	-	(3.00)	-	-	-	-	-	(3.00)
	PS Douglas Fir	-	-	-	(156.06)	-	(26.00)	(366.06)	-	-	(548.12)
	Silver Fir	-	(38.40)	-	(19.52)	-	-	(11.10)	-	-	(69.02)
	Sitka Spruce	-	-	-	-	(12.00)	(15.50)	-	-	-	(27.50)
	Western Hemlock	-	(550.44)	-	(302.15)	(21.70)	(30.15)	(63.12)	(16.11)	-	(983.67)
	Woodland Pr Mosaic	-	-	-	(19.00)	-	-	(38.50)	-	-	(57.50)
	Cowlitz River	-	(6.50)	-	-	-	(48.10)	-	-	-	(54.60)
	Willamette Valley	-	(242.00)	-	-	-	-	-	-	-	(242.00)
	Olympic Doug Fir	-	-	-	-	-	-	-	(0.22)	-	(0.22)
	Central Arid Steppe	(615.00)	-	-	-	-	-	-	-	-	(615.00)
	Ponderosa Pine	(25.00)	-	-	-	-	-	-	-	-	(25.00)
	Oak	-	-	(33.42)	-	-	-	-	-	-	(33.42)
	Grand Fir	-	-	-	-	-	-	-	(23.70)	-	(23.70)
	Int Western Hemlock	-	-	-	-	-	-	-	(6.20)	-	(6.20)
	<b>Total Acres</b>	<b>(640.00)</b>	<b>(10,514.84)</b>	<b>(1,396.20)</b>	<b>(6,074.73)</b>	<b>(838.24)</b>	<b>(2,605.91)</b>	<b>(6,317.41)</b>	<b>(206.45)</b>	<b>(1,114.84)</b>	<b>(29,708.62)</b>

Note: totals may not add due to rounding.



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## 7. Monitoring and Research

Monitoring is the feedback loop that provides information for decisions in the adaptive management process. The department focuses on research and monitoring to identify and eliminate the information barriers to full HCP implementation and improve the ability to meet management goals through adaptive management.

DNR's HCP Science Section provides both a centralized approach to research and monitoring and a systematic, consistent process for reporting research and monitoring results. Sound application of silvicultural and ecological knowledge, creative ideas, and reliable data are needed to develop innovative forest management practices capable of achieving the financial and ecological objectives of the state trust lands HCP. Since the HCP was adopted in 1997, there have been advances in terms of understanding the biology of spotted owls, marbled murrelets, and other listed and unlisted species. However, much remains to be learned, and new systems and techniques continue to be developed and tested. Additional reliable information that is applicable to management decisions can be obtained only through well planned and well executed monitoring and research. Balancing the need to make good statistical inferences with the need to gather and assess information on 1.6 million acres of HCP landscapes is an enormous challenge.

A system consisting of three types of monitoring—implementation, effectiveness, and validation—has become a common organizational framework for monitoring programs in forest management.

- **Implementation monitoring**, also known as compliance monitoring, determines whether or not a management plan (e.g., an HCP) is implemented properly on the ground.
- **Effectiveness monitoring** determines whether or not the management plan is producing the desired habitat conditions.
- **Validation monitoring** determines whether or not certain species respond to the desired habitat conditions as anticipated. Research supports the completion of conservation strategies, tests promising alternatives to current practices, and contributes to the ecological foundation of management practices.

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### Implementation Monitoring

In 2006, implementation monitoring was conducted in all Western Washington planning units (Columbia, North Puget, OESF, South Coast, South Puget, and Straits) as well as the Klickitat Planning Unit. DNR's implementation monitoring protocol calls for review of different conservation strategies or components each year. This year, the stream typing

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and buffering components of the riparian strategy were selected for review. Compliance with these strategy components was determined through verification of site potential tree heights, stream typing verification, and estimation of buffer widths. Stream typing was determined based on the water typing system for forested state trust lands as described by DNR (2006b). Site potential tree heights (used to determine required buffer widths) were verified using soil reports from DNR's Planning and Tracking (P&T) database and site index tables for the dominant conifer species in the upland portion of the riparian ecosystem, as prescribed in the HCP. Riparian buffer widths were estimated using a combination of Geographic Information System (GIS) data, Global Positioning System (GPS) data, and data collected by DNR staff as they traversed with a compass and laser rangefinder. Detailed methods and results will be provided in a separate report.

In addition, pre-harvest stand measurements were completed on a variable density thinning unit of the Loop timber sale in the Klickitat Planning Unit. Post-harvest stand measurements will be taken after the unit is harvested and the data will be analyzed to determine if the harvest unit remains suitable sub-mature habitat post-harvest. Additional analyses will be completed in conjunction with spotted owl effectiveness monitoring in the same unit.

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## Effectiveness Monitoring, Validation Monitoring, and Research

The following briefly summarizes DNR's current efforts in effectiveness monitoring, validation monitoring, and research. Only those projects that had significant developments in the reporting period are discussed.

### Riparian Conservation Strategy

Measuring one of the ten species of fish that occur at the mouths of experimentally manipulated headwater streams.

The objectives of riparian monitoring and research are to:

- increase confidence in DNR's ability to integrate biodiversity-type thinning in management of riparian areas;
- help promote acceleration of the development of older stand conditions in riparian areas;
  - help develop new guidelines for assessing wind throw risk and determining the need for wind buffers; and
  - support the development of the Type 5 stream conservation strategy.



In addition, this work supports the adaptive management goals of the riparian conservation strategy, such as reexamination of watershed condition and changes in aquatic habitat quality.

Information from this monitoring will increase DNR's ability to understand the influence of land management on aquatic habitat conditions and effectively implement the conservation strategies

to reach the goals of the HCP.



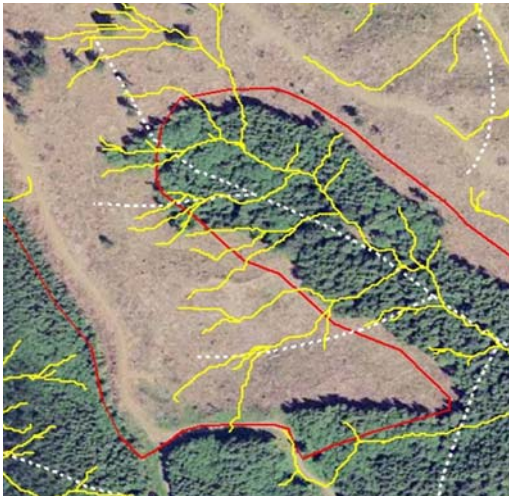
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Significant progress was made on the research components that will supply information for the development of the pending Type 5 stream long-term conservation strategy, as well as several other projects.

### 1. Headwater Buffer Experimentation

Since 1999 DNR—in cooperation with the USFS Pacific Northwest Forestry Sciences Laboratory, Washington’s Department of Ecology, the University of Washington, the Evergreen State College, and the University of California at Davis—has conducted a research project to determine the possible influence of different buffer configurations on first order streams in Western Washington. That research is now yielding results about the heterogeneity of stream conditions, trophic connections with downstream systems, and landscape influences.

The study design imposes a range of buffer configurations around headwater streams (outlined on DNR’s HCP website <http://www.dnr.wa.gov/hcp>). The results of this study will help support the development of a long-term conservation strategy for Type 5 streams on DNR-managed state lands in Western Washington.



A model of expected headwater stream locations (solid yellow lines) and currently mapped streams (dashed white lines).

In addition to ongoing post-harvest data collection efforts at 34 streams in nine sites, two major projects were initiated:

A chronosequence of aerial photography from agency-collected imagery, supplemented by additional contract flights, will be used to monitor the structural integrity of riparian buffers over time. Testing of photogrammetric analysis software, including BAE Systems Socet Set, is underway.

LIDAR imagery, available for 19 of the 34 study streams, was used to build flow accumulation models to predict the location of headwater stream channels. Data collected using precision GPS units, combined with previously collected stream survey data was used to verify the accuracy of the LIDAR model.

Various differential correction techniques were analyzed to quantify the level of precision achieved.

#### *Project Activities*

- Treatments have been completed at nine locations in DNR’s Pacific Cascade Region.
- One-year post treatment measurement is complete. Two-year post treatment measurement is underway.
- Herbicide spraying is being monitored on two sites to determine if herbicide drift occurs in buffers.
- Presentations about this project were given at Oregon Headwaters Cooperative (Corvallis 2005), Soil Science Society of America (Salt Lake 2005), California Forest Soils Council (Davis 2005), Puget Sound/Georgia Basin Research Conference (Seattle 2005), Northwest Forest Soils Council (Portland 2005), and the World Soils Congress (Philadelphia 2006).

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## 2. Retrospective Analysis of Interim Protection of Type 5 Streams

In 2004, DNR initiated a major study designed to quantify how the interim Type 5 stream protection measures have been interpreted in the field. Using GIS analysis linked with existing department databases, DNR determined the population of forest stands that were clear cut harvested following HCP guidelines. That population was stratified using EPA ecozone and sites were selected with both LIDAR coverage and post-harvest aerial photography. The locations of headwater streams were modeled from the LIDAR data. Field crews verified the location of the modeled streams and mapped various hydrologically significant points using a precision GPS unit operating ArcPad, a mobile GIS platform. Field data were then used to determine the extent of the headwater system and to quantify the extent of any riparian buffering.

Techniques are being tested to map the precise configuration of the riparian buffers and harvest boundary using BAE Systems Socet Set photogrammetric analysis software. A process to automate the forest edge detection is being examined. Terrain models of the forest canopy extracted from stereo imagery and first-return LIDAR are being used to detect sharp changes in elevation and slope along the harvest edge.

### *Project Activities*

- Field testing of protocols to collect and post-process precision GPS data.
- Field measurements completed at 77 sites, encompassing more than 3000 acres.

## 3. Effectiveness Monitoring of the Riparian Forest Restoration Strategy

Monitoring of silviculture treatment alternatives for riparian areas continued in FY 2006. Silvicultural treatments were applied on the Cougarilla and Sumas Pass timber sales this year. These are early implementations of the Riparian Forest Restoration Strategy being used for staff training and as demonstration projects. Table 7.1 identifies the sites, timelines, and treatments of implemented and scheduled riparian restoration sites.

**Table 7.1.** Current riparian forest restoration activities

Region	Site	Harvest	Adaptive Management Type	Treatments
Olympic	H1100	2003	Active	Control, RD40, RD 50
Olympic	H1320	2004	Active	Control, RD40, RD50
Northwest	Salmon PC	2005	Active	Control, RD40, RD50
South Puget	Cougarilla	2006-2007	Active	Control, RD40, RD50 with gaps
Coop with Green Diamond	NB103	2005	Active	Control, RD40, RD50
Northwest	Sumas Pass	Ongoing	Active	Control, RD40, RD50
Pacific Cascade	Jammed Radar	Spring 2007	Active	Control, RD40, RD50
South Puget	Hurd Road Pole	Sold 2006	Passive	

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### **Outreach expanded to the web**

A website to document and aid implementation of the Riparian Forest Restoration Strategy has been created. This website helps DNR organize information and will allow stakeholders to obtain background information regarding the strategy, including documents from the training session held in spring 2005 for DNR's riparian designees. The website currently includes the strategy document and a brief overview. Over time, it will also include sections on silvicultural strategies and effectiveness monitoring; the adaptive management feedback process; successes; and opportunities for improvement to the strategy.

### **The future of riparian silviculture effectiveness monitoring**

Upcoming objectives for monitoring of the Riparian Forest Restoration Strategy focus on expanding the implementation acreage of the strategy. Another objective is to expand the scope of treatments. Where space allows, additional treatments such as relative density (RD) 35 may be incorporated into an active adaptive management cycle. Additionally, evaluation of the edges of thinned RMZs will provide a quantitative assessment of the strategy's implementation.

#### *Project Activities*

- Continuation of monitoring of habitat conditions and initial responses of forest structures and composition to restoration on seven effectiveness monitoring sites.
- Approval by the Federal Services of the Riparian Forest Restoration Strategy as a document and as region projects. The Services gave approval to implement the strategy in DNR's Northwest, South Puget Sound, and Pacific Cascade regions. Harvest units in these three regions will be brought into the monitoring program. Approval for implementation in the Olympic region is expected during winter 2007.
- Acquisition of critical long-term monitoring staff.
- Consultation with stakeholders on the Riparian Forest Restoration Strategy's objectives and tactics.

### **4. Effectiveness Monitoring of the Riparian Instream Conditions and Trends**

Working with NOAA Fisheries scientists and consulting ecologist Mark Meleason, progress was made in adapting the OSU STREAMWOOD model to evaluate the potential effects of forest management on the long-term supply of wood to streams. This work will continue in 2007, exploring the value of OSU STREAMWOOD to simulate riparian forest growth, tree entry into streams including tree breakage, and in-channel processes like log breakage, movement, and decomposition. This work is designed to link the existing research and monitoring associated with the riparian restoration strategy and instream conditions and trends monitoring.

#### *Project Activities*

- A manuscript reporting the first three years of monitoring instream conditions and trends on the Olympic Peninsula is being reviewed by NOAA Fisheries scientists.

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- Plans for the winter of 2007 include the selection of new monitoring sites on the Olympic Peninsula to test hypotheses describing recovery processes of stream temperature in managed forests on the outer coast.

## **5. Water Quality Monitoring on Mill and Abernathy Creeks**

A phased riparian effectiveness monitoring pilot project was initiated in early 2005 in conjunction with Washington's Department of Ecology. Two water quality stations were installed in Water Resource Inventory Area (WRIA) 25. One station is on Abernathy Creek and located near the south section line of Section 9 T9NR4W. The other station is located on Mill Creek near the end of road E-2902 in Section 32 T9NR4W.

Data collected on these streams is used for a water quality index, which is designed to rate general water quality. Data are converted to scores ranging from 1 to 100 (with higher numbers indicative of better water quality) based on the methodology outlined on Ecology's website at <http://www.ecy.wa.gov/pubs/0203052.pdf>. Data also is collected on stream flow and water temperature. Estimation of stream flow requires that measurements across a wide range of flows be taken and then correlated with stage-height. After data has been collected for at least a year, a model of the continuous flow record can be created. Stream flow data helps determine the amount of water available for fish, diversion for human usage, and other potential uses. By collecting data year round, seasonal and annual flow and water quality patterns can be detected. This can then be compared to expectations for the site, and potentially used to mitigate harmful land uses.

This project will determine if management practices and activities under the HCP are meeting performance targets by improving water quality and habitat.

### *Project Activities*

- Phase I of the Scope of Work—water quality sampling—took place throughout fiscal year 2006. The data (both preliminary and final) can be found at <http://www.ecy.wa.gov/apps/watersheds/riv/station.asp?theyear=&tab=notes&scroly=165&wria=25&sta=25F100> for Mill Creek and <http://www.ecy.wa.gov/apps/watersheds/riv/station.asp?theyear=&tab=notes&scroly=0&sta=25E100> for Abernathy Creek
- Phase II—Flow and Water Quality (continuous turbidity measurements)—began in 2005 with the installation of stage-height recorders and turbidity sensors. Verified data can be found at: <https://fortress.wa.gov/ecy/wrx/wrx/flows/station.asp?sta=25F100> for Mill Creek and <https://fortress.wa.gov/ecy/wrx/wrx/flows/station.asp?sta=25E100> for Abernathy Creek.

## **Northern Spotted Owl Conservation Strategy**

The objective of this monitoring and research is to increase confidence in DNR's ability to integrate biodiversity-type thinning into the timber sales program and help understand its role in meeting habitat goals. In addition, this work supports the adaptive management goals of the HCP northern spotted owl conservation strategy, such as examination of down wood levels targeted for different types of habitat.

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## 1. Effectiveness Monitoring of Spotted Owl Habitat

The objective of spotted owl effectiveness monitoring, as defined by the Habitat Conservation Plan (DNR 1997, p.V.2), is to determine whether the applied management activities result in anticipated habitat conditions.

DNR is currently conducting passive monitoring based on a comparison of stand characteristics before and after treatment. Selected timber sales are sampled pre-harvest, immediately post-harvest, and in the 2<sup>nd</sup>, 5<sup>th</sup> and 10<sup>th</sup> year post-harvest to assess habitat development. Each monitored timber sale is comprised of three treatment replicas and one unmanaged control with eleven stand characteristics sampled in 0.1-acre permanent plots (field protocol developed by Wilhere and Bigley 2001). The fieldwork was initiated in 2004 with a pilot project in the Siouxon Nesting, Roosting and Foraging (NRF) Management Area.

### *Project Activities*

Three timber sales were sampled during the 2006 field season. The monitoring objective for all of them is to assess the role of variable density thinning for maintenance and enhancement of spotted owl habitat.

- **Lyon's Share timber sale**—variable density thinning in NRF management area in Western Washington (Siouxon block)
  - Second year post-harvest data were collected.
  - Analyses evaluating the short-term changes in habitat condition are being conducted.
  - Preliminary results on stand development two years post-harvest are expected in December 2006.
- **Cougarilla timber sale**—variable density thinning in dispersal management area in Western Washington (Tahoma block)
  - First year post-harvest measurements were collected.
  - Currently conducting comparisons of pre- and post-harvest conditions.
- **Loop timber sale**—variable density thinning in NRF management area in Eastern Washington (Husum sub-landscape)
  - The project started in 2006; all pre-harvest measurements were collected.
  - Data is being formatted for future analyses.



Comparing a densiometer and a fish-eye lens digital camera for measuring canopy closure.

## 2. Northern Spotted Owl Surveys in Southwest Washington

The objectives of this project are to:

- 1) Collect recent data on northern spotted owl occupancy in NRF management areas on DNR-managed land in the Columbia Planning Unit, and all known Status 1-3 spotted owl sites in the Western Washington lowlands; and
- 2) Delineate areas for long-term northern spotted owl validation monitoring.

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The two-year project started in 2005. The fieldwork was contracted to National Council for Air and Stream Improvement (NCASI) and followed standardized federal protocol for spotted owl surveys (Lint et al. 1999). The survey area encompasses the Siouxon and Columbia NRF management areas in the Columbia Planning Unit, and the DNR-managed land within the 2.7-mile buffers around eight site centers in the Southwest Washington (SWWA) lowlands. The total number of previously known northern spotted owl sites in the survey area is 29 (WDFW 2005).

*Project Activities*

- Fieldwork for the second year of surveys was completed.
- 2006 results show:
  - Five occupied spotted owl sites (two in Siouxon, one in Columbia, and two in the SWWA lowlands); all detections were in close proximity to the historic site centers; no signs of reproduction.
  - More than 200 barred owl detections.
- Final results of the project, including detailed maps with all spotted owl and barred owl detections, will be submitted by February 2007.

**3. Northern Spotted Owl Demography Monitoring in Southeast Washington**

The goal of this project is to provide information on occupancy, fecundity and survival of spotted owls at 20 sites in the Klickitat and Yakima planning units. The results are being used for conservation and management planning in the area and will be considered for future adaptive management and validation monitoring activities.

This is a five-year project that was initiated in 2001. The fieldwork is conducted by NCASI. The 20 monitored sites on DNR-managed land are part of the Wenatchee demographic study area—one of the 14 study areas throughout the spotted owl geographic range that provide information on species survival and fecundity rates used to estimate the annual rate of population change.

*Project Activities*

- Fieldwork (6 visits per site) was completed in September 2006.
- 2006 results show:
  - One reproductive pair with two juveniles at the Dairy Creek/Klickitat River site.
  - Two sites had single birds (Dairy Creek North Fork and Ladiges Spring)
  - Numerous barred owl detections (data on barred owl occupancy are currently being cleared of duplicates).
- A new 3-year contract to extend demography monitoring in this area is being developed.

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## **HCP Data Management**

Proper management of HCP data resources is critical for the successful operation of the HCP Science Section and affects land management activities throughout the agency. The HCP Data Steward/GIS Analyst is responsible for the development, usage, and interface of HCP datasets (GIS layers and databases). This person also provides cartographic support and performs spatial analyses and queries.

### *Project Activities*

- A new Spotted Owl Management Unit (SOMU) layer was developed. It combines all spotted owl management units throughout the HCP-managed lands i.e. Landscape Planning Units for the OESF; Watershed Administrative Units (WAUs) for the three Westside planning units; and quarter townships and WAUs for the Eastside planning units.
- A GIS layer identifying the next best northern spotted owl habitat within the Columbia and South Puget planning units was created.
- Ongoing revision and maintenance of the GIS layer identifying all spotted owl habitat management areas, including accounting for land transactions and creating a process to correct for cadastral (ownership and boundary) adjustments.
- A GIS layer identifying spotted owl habitat on the Westside was created, based on combined criteria from the HCP and the Settlement Agreement for the Sustainable Harvest Level.
- A GIS layer depicting HCP-managed lands is being developed. The layer will automatically be updated for completed land transactions.
- A geodatabase of marbled murrelet survey data is being developed. It links collected data to their sites and stations throughout western Washington. Ongoing cartography support is being provided for the Draft Marbled Murrelet Conservation Strategy, currently under development.

## **Marbled Murrelet Conservation Strategy**

The objective of this research is to support the development of the marbled murrelet long-term conservation strategy and related monitoring. The primary focus of funding in fiscal year 2006 was to document murrelet flight activity over inland forests (stand surveys). A portion of the available funding was used to research site selection and confirmed murrelet nesting sites.

### **Breeding Ecology of Marbled Murrelets**

To support current and future conservation strategy development and monitoring, DNR and the USFS Pacific Northwest Research Station are in year three of a four-year study to gather information on marbled murrelet movement patterns (both at sea and inland), demography, and habitat use. Information of this type is limited, especially in Washington State. Information on specific nest sites and the way murrelets utilize the forested landscape will be invaluable in implementing and monitoring the department's long-term murrelet conservation strategy. This project also will reduce the reliance on demographic data from the central British Columbia coast, where habitats are considerably different.



A successful marbled murrelet nest.

In 2006, 40 adult marbled murrelets were captured and had radiotransmitters secured to their backs. To locate these murrelets on a regular basis, researchers coordinated Cessna radio tracking flights throughout Washington marine waters and southern Vancouver Island. Following identification of nesting stands via aerial telemetry, ground searches using telemetry were conducted to identify nest trees for further monitoring.

Only two of the 40 murrelets were detected making a nesting attempt in 2006. Remote telemetry data loggers were installed along the flight paths to both of these nests to record the visits made by each radio-tagged bird (one at each nest). Additionally, a video camera was installed in a tree next to one of the nest trees to directly monitor nesting behavior and adult attendance at this nest.

### *Project Activities*

- In 2006, crews were on the water from April 24 to June 3 searching for marbled murrelets in nearshore (fewer than 3 miles from shore) marine waters adjacent to the Olympic Peninsula.
- Radio transmitters were placed on 40 adult marbled murrelets. Birds were tracked via radiotelemetry from April 27 to August 4. Tracking flights were generally performed five times a week (Monday–Friday) until mid-July when they were switched to weekly.
- Only two of the 40 captured murrelets were detected making nesting efforts in 2006—both near Port Renfrew on Vancouver Island. The other 38 birds apparently remained at sea during the breeding season.
- One nest failed (the chick was bumped off the limb by the adult during a feeding attempt), the other was apparently successful.
- Plans are being made to continue captures and tracking in 2007.

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## **Marbled Murrelet Long-Term Conservation Strategy Update**

### **Long-term conservation strategy for the Olympic Experimental State Forest, Straits, South Coast and Columbia planning units**

The marbled murrelet Science Team, charged with developing the scientific basis for the marbled murrelet long-term conservation strategy, has completed the following steps:

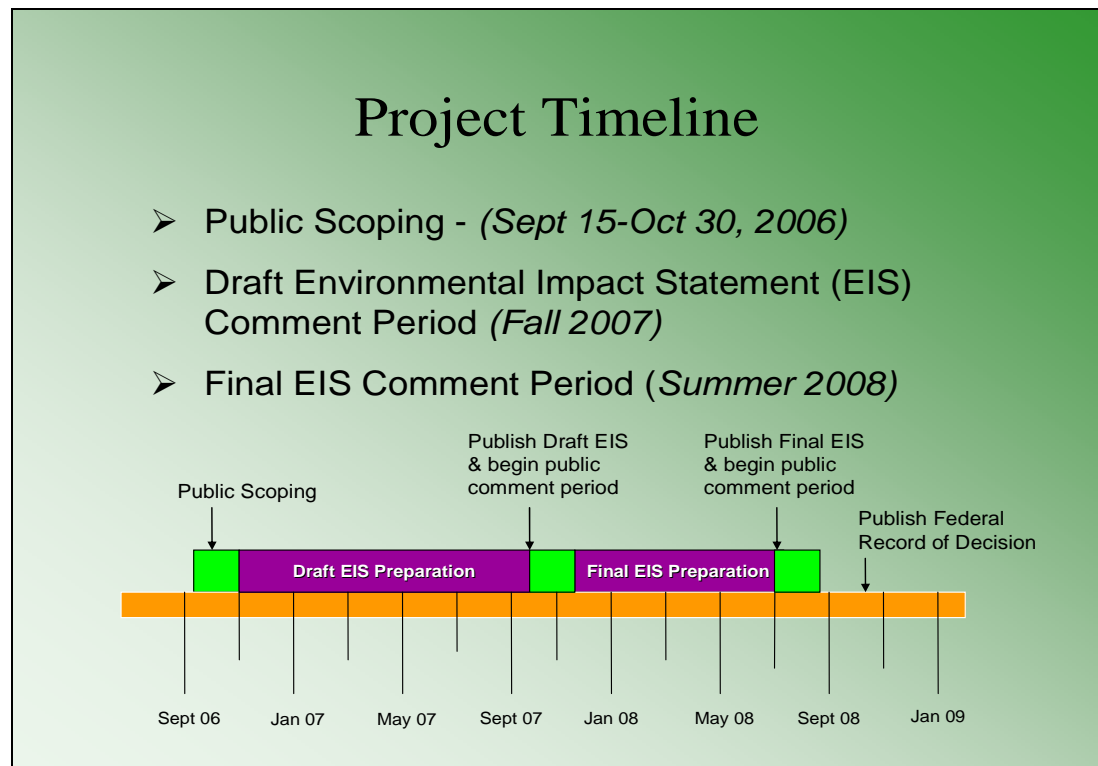
- 1) Identified landscapes that are priorities for marbled murrelet conservation;
- 2) Described forest habitat conditions that will be important for the development of future habitat;
- 3) Developed predation models that will help evaluate predation risks to murrelet nests; and



- 4) Analyzed a suite of management scenarios that demonstrate how different types of forest management activities influence the development of future habitat, carrying capacity, and predation risks for the marbled murrelet.

A report of findings from the Science Team is expected in early 2007. Managers from DNR and the Services will need to be informed of the Science Team’s findings and understand the conservation, financial and operational impacts of management options in order to arrive at a proposal. It is anticipated that during the coming year, DNR and the Services will work towards a mutually agreed upon, long-term marbled murrelet conservation strategy proposal for forested state trust lands in Western Washington.

DNR and the United States Fish and Wildlife Service (USFWS) have begun this process by initiating public ‘scoping’ and requesting public comment under the State Environmental Policy Act (SEPA) and National Environmental Policy Act (NEPA). Scoping is the first phase of a multi-phased process under both of these environmental reviews (Figure 7.1). During scoping, the public is asked to provide input on what should be included in the project, and to offer their concerns about possible environmental impacts.



**Figure 7.1.** Project timeline for the Marbled Murrelet Long-term Conservation Strategy for the OESF, Straits, South Coast, and Columbia planning units

### Inventory Surveys

The South Puget Planning Unit is implementing step #1 as described in the HCP interim conservation strategy, which states that “DNR shall identify and defer harvest of any part of a suitable habitat block” (DNR 1997, p. IV.39). In early 2007, DNR expects to begin

exploring options with USFWS that will result in marbled murrelet habitat identification processes in the South Puget Planning Unit.

### Summary of Marbled Murrelet Survey Results in the North Puget Planning Unit 2001-2006

DNR has completed 6 seasons of inventory surveys in the North Puget Planning Unit. At this point DNR has gained some initial perspective from our efforts to identify suitable murrelet habitat and occupied sites.

Consistent with the general approach for Westside planning units, in the North Puget Planning Unit, a habitat model was developed from a habitat relationship study. This model designated 27,780 acres of “reclassified habitat” (expected to contain at least 95 percent of occupied sites) and 82,437 acres of “marginal habitat” (expected to contain not more than 5 percent of occupied sites), out of a total 453,723 acres (HCP lands and Natural Areas) evaluated by the model.

Due to concerns that the reclassified model did not capture enough of the suitable habitat, subsequent efforts were made to identify additional areas of suitable habitat. The “reclassified-plus” screens added 6,209 acres, while a compilation of “other” habitat areas based on field knowledge identified 6,263 additional acres. In total, these sources have identified around 40,000 acres of habitat in the NPPU. (NOTE: this represents acreage of *potential* habitat; field verification to date has found at least half of the acreage to be unsuitable, and thus available for immediate release from deferral for forest management.)

**Table 7.2.** Current marbled murrelet survey status by habitat source

Year Initiated	Source	Number of Sites	Number Occupied	Percent Occupied
2001	Reclassified	113	11	
2002	Plus	10	0	
2003	Other	1	1	
2004	Reclassified	3	0	
	Plus	47	5	
	Other	11	1	
2005	Reclassified	2	2	
	Plus	19	6	
	Other	26	4	
2006*	Reclassified	8	0	
	Plus	18	0	
	Other	30	4	
Total	Reclassified	126	13	10
	Plus	94	11	12
2001-2006*	Other	68	10	15
	Overall	288	34	12

\*In-progress; will be completed in 2007.

As of the end of the 2006 season, DNR’s inventory surveys have yielded 34 occupied sites, of which 13 were identified by the reclassified model and 21 by the “plus” and “other” sources.

These preliminary data are useful. It appears that concerns with the original (reclassified) modeling effort in the North Puget Planning Unit were well founded. While expected to capture at least 95 percent of occupied sites, at this point in our inventory process the reclassified habitat contains less than 39 percent of the occupied sites found. This percentage is expected to increase because most of the remaining acreage is from the reclassified model.

**Table 7.3.** Summary timeline for marbled murrelet inventory surveys under the interim HCP strategy in the North Puget Planning Unit

Surveys Initiated (2 Year Effort)	Acres Potential Habitat Delineated	Sites Surveyed	Acres Surveyed (Delineated)	Notes/Additional Efforts
2001	*	113		Reclassified habitat polygons surveyed; habitat unverified
2002	*	14		Reclassified-plus habitat polygons surveyed 2002; suitability evaluated 2003 (4 sites unsuitable so dropped)
2003	*	1		No contract; finished plus sites initiated in 2002 in-house
2004	≈ 1,800	61	1,165	
2005	2,150	47	935	Also delineated 1,744 acres of reclassified habitat surveyed 2001-2002. Delineate occupied sites (≈1,300 acres, by DNR temp staff)
2006	3,000	56	1,100	Also finished delineating ≈2,200 acres of reclassified habitat surveyed in 2001-2002 – finish occupied site delineations started in 2005
2007#	3,150			Survey Spada Lake area “General Ecological Management” (GEM) lands
2008#	2,035			Survey Deming district high elevation stands
2009#	2,700			Survey Starbird district high elevation stands
2010-2011#	11,250			Sample the 11,250 acres of NAP/NRCA lands

\*Systematic delineation of habitat suitability was not initiated until 2004. Habitat delineation generally occurs in the summer/fall prior to the year surveys are initiated.

# This work is anticipated to happen following the timeline noted.



# Appendix A. Silvicultural Activities

Table A.1 details silvicultural activities that took place in each HCP planning unit in fiscal year 2006. It is derived from DNR's Forest Management Planning and Tracking (P&T) database, and includes all activities reported as completed during the reporting period. The type of activity, number of acres impacted, legal location (township, range, and section), and Forest Practices Application (FPA) number are included. Not all activities require an FPA, so these numbers are only listed where applicable.

The data in this appendix are summarized in the tables in the Silvicultural Management Activities chapter of this report.

**Table A.1.** Silvicultural management activity detail by planning unit

Columbia Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	98	T03N R04E S07	2905265
Timber harvest - Clear cut	71	T03N R04E S09	2910688
Timber harvest - Clear cut	72	T03N R04E S09	2910688
Timber harvest - Clear cut	100	T03N R04E S18	2904504
Timber harvest - Clear cut	97	T03N R04E S26	2904483
Timber harvest - Clear cut	63	T03N R04E S36	2904483
Timber harvest - Clear cut	43	T04N R03E S24	2911666
Timber harvest - Clear cut	18	T04N R03E S24	2911666
Timber harvest - Clear cut	56	T04N R04E S20	2905181
Timber harvest - Clear cut	88	T04N R04E S28	2905181
Timber harvest - Clear cut	11	T04N R04E S28	2905181
Timber harvest - Clear cut	105	T04N R04E S29	2905181
Timber harvest - Clear cut	25	T05N R03E S08	2911802
Timber harvest - Clear cut	21	T05N R03E S09	2910773
Timber harvest - Clear cut	40	T05N R03E S09	2910773
Timber harvest - Clear cut	2	T05N R03E S09	2911802
Timber harvest - Clear cut	24	T05N R03E S09	2911802
Timber harvest - Clear cut	9	T06N R02E S28	2910632
Timber harvest - Clear cut	30	T06N R02E S28	2910632
Timber harvest - Clear cut	5	T06N R02E S28	2910632

Columbia Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	20	T06N R02E S28	2910632
Timber harvest - Clear cut	6	T06N R02E S36	2910398
Timber harvest - Clear cut	67	T06N R03E S08	2904333
Timber harvest - Clear cut	70	T06N R03E S16	2910633
Timber harvest - Clear cut	30	T06N R03E S16	2910633
Timber harvest - Clear cut	6	T06N R03E S31	2910398
Timber harvest - Clear cut	72	T06N R03E S31	2910398
Timber harvest - Clear cut	52	T06N R04E S05	2904489
Timber harvest - Clear cut	48	T06N R04E S07	2911036
Timber harvest - Clear cut	4	T06N R04E S07	2910206
Timber harvest - Clear cut	38	T06N R04E S08	2910206
Timber harvest - Clear cut	42	T06N R04E S08	2910206
Timber harvest - Clear cut	33	T06N R04E S18	2911036
Timber harvest - Clear cut	26	T06N R04E S18	2911036
Timber harvest - Clear cut	24	T07N R04E S28	2905200
Timber harvest - Clear cut	69	T07N R04E S28	2905200
Timber harvest - Clear cut	84	T07N R04E S29	2903849
Timber harvest - Clear cut	11	T07N R04E S29	2903849
Timber harvest - Clear cut	37	T07N R04E S31	2904489
Timber harvest - Clear cut	64	T07N R04E S32	2904489
Timber harvest - Clear cut	1	T08N R04W S04	2905199
Timber harvest - Clear cut	66	T09N R01W S36	2910890
Timber harvest - Clear cut	85	T09N R04W S28	2905199
Timber harvest - Clear cut	17	T09N R04W S33	2905199
Timber harvest - Clear cut	25	T09N R04W S33	2905199
Timber harvest - Clear cut	19	T10N R01E S36	2905501
Timber harvest - Clear cut	23	T10N R01E S36	2905501
Timber harvest - Clear cut	48	T10N R06W S23	2904287
Timber harvest - Clear cut	50	T11N R03W S01	2512173
Timber harvest - Clear cut	66	T12N R02E S33	2911450
Timber harvest - Clear cut	12	T12N R02E S33	2911450
Timber harvest - Clear cut	44	T12N R03W S36	2512173
Timber harvest - Late rotation thinning	55	T04N R03E S25	2911666
Timber harvest - Late rotation thinning	3	T04N R03E S26	2911666
Timber harvest - Late rotation thinning	27	T04N R03E S26	2911666

Columbia Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Late rotation thinning	14	T06N R03E S10	2905142
Timber harvest - Late rotation thinning	36	T06N R03E S10	2905142
Timber harvest - Late rotation thinning	105	T09N R05W S25	2905027
Timber harvest - Shelterwood intermediate cut	9	T05N R03E S09	2910773
Timber harvest - Shelterwood intermediate cut	12	T05N R03E S10	2910773
Timber harvest - Smallwood thinning	5	T02N R04E S14	2904866
Timber harvest - Smallwood thinning	28	T02N R04E S15	2904866
Timber harvest - Smallwood thinning	119	T02N R04E S15	2904866
Timber harvest - Smallwood thinning	2	T02N R04E S15	2904866
Timber harvest - Smallwood thinning	1	T02N R04E S15	2904866
Timber harvest - Smallwood thinning	152	T02N R04E S16	2904866
Timber harvest - Smallwood thinning	29	T02N R04E S16	2904866
Timber harvest - Smallwood thinning	16	T05N R03E S09	2910773
Timber harvest - Smallwood thinning	28	T05N R03E S09	2910773
Timber harvest - Smallwood thinning	40	T07N R05E S04	2905003
Timber harvest - Smallwood thinning	39	T07N R05E S04	2905003
Timber harvest - Smallwood thinning	40	T07N R05E S04	2905003
Timber harvest - Smallwood thinning	28	T07N R05E S04	2905003
Timber harvest - Smallwood thinning	30	T11N R02E S22	2511724
Timber harvest - Smallwood thinning	4	T12N R03W S15	2511767
Timber harvest - Variable density thinning	139	T06N R04E S02	2905167
Timber harvest - Variable density thinning	8	T06N R04E S11	2905167
Timber harvest - Variable density thinning	38	T06N R04E S14	2905167
Timber harvest - Variable density thinning	17	T07N R05E S30	2910772
Timber harvest - Variable density thinning	26	T07N R05E S32	2910772
Timber harvest - Variable density thinning	8	T07N R05E S32	2910772
Timber harvest - Variable density thinning	53	T07N R05E S33	2910772
Timber harvest - Variable density thinning	8	T07N R05E S35	2910772
Timber harvest - Variable density thinning	24	T07N R05E S35	2910772
Timber harvest - Variable density thinning	6	T07N R05E S35	2910772
Forest site preparation - Aerial herbicide	96	T03N R04E S07	2911659
Forest site preparation - Aerial herbicide	26	T03N R04E S09	2911659
Forest site preparation - Aerial herbicide	12	T03N R04E S10	2911659
Forest site preparation - Aerial herbicide	42	T03N R04E S10	2911659
Forest site preparation - Aerial herbicide	42	T03N R04E S16	2911659

Columbia Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest site preparation - Aerial herbicide	36	T03N R04E S17	2911659
Forest site preparation - Aerial herbicide	98	T03N R04E S18	2911659
Forest site preparation - Aerial herbicide	94	T03N R04E S21	2911659
Forest site preparation - Aerial herbicide	84	T03N R04E S21	2911659
Forest site preparation - Aerial herbicide	28	T04N R03E S15	2911659
Forest site preparation - Aerial herbicide	70	T04N R03E S15	2911659
Forest site preparation - Aerial herbicide	98	T04N R04E S31	2911659
Forest site preparation - Aerial herbicide	61	T04N R04E S31	2911659
Forest site preparation - Aerial herbicide	15	T06N R02E S20	Missing
Forest site preparation - Aerial herbicide	30	T06N R02E S20	Missing
Forest site preparation - Aerial herbicide	37	T06N R02E S20	Missing
Forest site preparation - Aerial herbicide	27	T06N R02E S29	Missing
Forest site preparation - Aerial herbicide	20	T06N R02E S30	Missing
Forest site preparation - Aerial herbicide	56	T06N R03E S06	2911659
Forest site preparation - Aerial herbicide	22	T06N R03E S08	2911659
Forest site preparation - Aerial herbicide	84	T06N R03E S14	2911659
Forest site preparation - Aerial herbicide	34	T06N R03E S16	2911659
Forest site preparation - Aerial herbicide	28	T06N R03E S28	2911659
Forest site preparation - Aerial herbicide	14	T06N R03E S32	2911659
Forest site preparation - Aerial herbicide	36	T06N R03E S32	2911659
Forest site preparation - Aerial herbicide	11	T09N R04W S30	2911658
Forest site preparation - Aerial herbicide	62	T09N R04W S30	2911658
Forest site preparation - Aerial herbicide	43	T10N R01E S36	Missing
Forest site preparation - Aerial herbicide	34	T10N R01E S36	Missing
Forest site preparation - Aerial herbicide	75	T10N R02W S07	2911658
Forest site preparation - Ground herbicide	48	T02N R03E S11	
Forest site preparation - Ground herbicide	4	T02N R03E S11	
Forest site preparation - Ground herbicide	45	T02N R03E S11	
Forest site preparation - Ground herbicide	13	T04N R03E S15	
Forest site preparation - Ground herbicide	70	T04N R03E S15	
Forest site preparation - Ground herbicide	24	T04N R03E S15	
Forest site preparation - Ground herbicide	3	T04N R03E S22	
Forest site preparation - Ground herbicide	5	T06N R04E S24	
Forest site preparation - Ground herbicide	8	T06N R04E S25	
Forest site preparation - Ground herbicide	13	T06N R04E S33	



Columbia Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest site preparation - Ground herbicide	2	T09N R04W S17	
Forest site preparation - Pile and burn	30	T08N R05W S02	
Forest site preparation - Pile and burn	5	T08N R05W S04	
Forest site preparation - Pile and burn	10	T09N R04W S30	
Forest site preparation - Pile and burn	40	T09N R04W S30	
Forest site preparation - Pile and burn	34	T09N R05W S25	
Forest site preparation - Pile and burn	15	T10N R06W S15	
Forest site preparation - Pile and burn	5	T10N R08W S02	
Forest site preparation - Pile and burn	5	T10N R08W S02	
Forest regeneration - Hand planting	49	T02N R03E S11	
Forest regeneration - Hand planting	5	T02N R03E S11	
Forest regeneration - Hand planting	49	T02N R03E S11	
Forest regeneration - Hand planting	20	T03N R03E S16	
Forest regeneration - Hand planting	98	T03N R04E S07	
Forest regeneration - Hand planting	26	T03N R04E S09	
Forest regeneration - Hand planting	26	T03N R04E S09	
Forest regeneration - Hand planting	14	T03N R04E S10	
Forest regeneration - Hand planting	44	T03N R04E S10	
Forest regeneration - Hand planting	44	T03N R04E S10	
Forest regeneration - Hand planting	44	T03N R04E S16	
Forest regeneration - Hand planting	5	T03N R04E S17	
Forest regeneration - Hand planting	37	T03N R04E S17	
Forest regeneration - Hand planting	37	T03N R04E S17	
Forest regeneration - Hand planting	100	T03N R04E S18	
Forest regeneration - Hand planting	20	T03N R04E S18	
Forest regeneration - Hand planting	96	T03N R04E S21	
Forest regeneration - Hand planting	85	T03N R04E S21	
Forest regeneration - Hand planting	6	T03N R04E S31	
Forest regeneration - Hand planting	55	T04N R03E S15	
Forest regeneration - Hand planting	71	T04N R03E S15	
Forest regeneration - Hand planting	13	T04N R03E S15	
Forest regeneration - Hand planting	3	T04N R03E S22	
Forest regeneration - Hand planting	96	T04N R04E S31	
Forest regeneration - Hand planting	63	T04N R04E S31	
Forest regeneration - Hand planting	33	T05N R02E S01	

Columbia Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	84	T05N R03E S06	
Forest regeneration - Hand planting	7	T06N R01E S25	
Forest regeneration - Hand planting	15	T06N R02E S17	
Forest regeneration - Hand planting	27	T06N R02E S29	
Forest regeneration - Hand planting	66	T06N R02E S30	
Forest regeneration - Hand planting	20	T06N R02E S30	
Forest regeneration - Hand planting	57	T06N R03E S06	
Forest regeneration - Hand planting	25	T06N R03E S08	
Forest regeneration - Hand planting	85	T06N R03E S14	
Forest regeneration - Hand planting	36	T06N R03E S16	
Forest regeneration - Hand planting	35	T06N R03E S16	
Forest regeneration - Hand planting	30	T06N R03E S28	
Forest regeneration - Hand planting	15	T06N R03E S32	
Forest regeneration - Hand planting	40	T06N R03E S32	
Forest regeneration - Hand planting	50	T06N R04E S06	
Forest regeneration - Hand planting	25	T06N R04E S16	
Forest regeneration - Hand planting	30	T06N R04E S18	
Forest regeneration - Hand planting	30	T06N R04E S18	
Forest regeneration - Hand planting	5	T06N R04E S24	
Forest regeneration - Hand planting	10	T06N R04E S25	
Forest regeneration - Hand planting	12	T06N R04E S33	
Forest regeneration - Hand planting	23	T07N R01E S09	
Forest regeneration - Hand planting	20	T07N R01E S16	
Forest regeneration - Hand planting	24	T07N R04E S28	
Forest regeneration - Hand planting	69	T07N R04E S28	
Forest regeneration - Hand planting	37	T07N R04E S31	
Forest regeneration - Hand planting	57	T08N R04W S04	
Forest regeneration - Hand planting	1	T08N R04W S07	
Forest regeneration - Hand planting	93	T08N R05W S01	
Forest regeneration - Hand planting	10	T08N R05W S03	
Forest regeneration - Hand planting	44	T08N R05W S04	
Forest regeneration - Hand planting	9	T08N R05W S04	
Forest regeneration - Hand planting	19	T09N R03E S19	
Forest regeneration - Hand planting	32	T09N R03E S30	
Forest regeneration - Hand planting	2	T09N R03E S30	

Columbia Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	30	T09N R03E S30	
Forest regeneration - Hand planting	31	T09N R03E S30	
Forest regeneration - Hand planting	3	T09N R04W S03	
Forest regeneration - Hand planting	20	T09N R04W S16	
Forest regeneration - Hand planting	2	T09N R04W S17	
Forest regeneration - Hand planting	13	T09N R04W S30	
Forest regeneration - Hand planting	1	T09N R04W S31	
Forest regeneration - Hand planting	34	T09N R05W S25	
Forest regeneration - Hand planting	3	T09N R05W S25	
Forest regeneration - Hand planting	1	T09N R05W S27	
Forest regeneration - Hand planting	34	T10N R01E S36	
Forest regeneration - Hand planting	43	T10N R01E S36	
Forest regeneration - Hand planting	75	T10N R02W S07	
Forest regeneration - Hand planting	35	T10N R02W S07	
Forest regeneration - Hand planting	97	T10N R02W S22	
Forest regeneration - Hand planting	3	T10N R03W S01	
Forest regeneration - Hand planting	40	T10N R06W S15	
Forest regeneration - Hand planting	52	T10N R08W S02	
Forest regeneration - Hand planting	16	T10N R08W S02	
Forest regeneration - Hand planting	18	T11N R02E S28	
Forest regeneration - Hand planting	78	T11N R02E S28	
Forest regeneration - Hand planting	46	T11N R03W S01	
Forest regeneration - Hand planting	42	T12N R03W S36	
Forest regeneration - Hand planting	32	T12N R08E S20	
Vegetation management - Aerial herbicide	25	T02N R04E S15	2911659
Vegetation management - Aerial herbicide	35	T02N R04E S15	2911659
Vegetation management - Aerial herbicide	20	T02N R04E S15	2911659
Vegetation management - Aerial herbicide	82	T02N R04E S17	2911659
Vegetation management - Aerial herbicide	80	T05N R03E S02	2911659
Vegetation management - Aerial herbicide	50	T06N R03E S10	2911659
Vegetation management - Aerial herbicide	50	T06N R03E S16	2911659
Vegetation management - Aerial herbicide	81	T11N R02E S28	1259874
Vegetation management - Ground herbicide	45	T04N R03E S13	
Vegetation management - Ground herbicide	33	T05N R02E S01	
Vegetation management - Ground herbicide	84	T05N R03E S06	

<b>Columbia Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Vegetation management - Ground herbicide	9	T12N R02E S32	
Vegetation management - Hand cutting	15	T02N R07E S15	
Vegetation management - Hand cutting	8	T03N R03E S16	
Vegetation management - Hand cutting	50	T06N R03E S15	
Vegetation management - Hand cutting	5	T06N R04E S05	
Vegetation management - Hand cutting	10	T06N R04E S05	
Vegetation management - Hand cutting	20	T06N R04E S06	
Vegetation management - Hand cutting	5	T06N R04E S13	
Vegetation management - Hand cutting	20	T06N R04E S13	
Vegetation management - Hand cutting	15	T06N R04E S24	
Vegetation management - Hand cutting	15	T06N R04E S28	
Vegetation management - Hand cutting	15	T06N R04E S28	
Vegetation management - Hand cutting	5	T06N R04E S28	
Vegetation management - Hand cutting	15	T06N R05E S18	
Vegetation management - Hand cutting	10	T06N R05E S19	
Vegetation management - Hand cutting	46	T09N R04W S19	
Vegetation management - Hand cutting	14	T10N R06W S29	
Vegetation management - Hand cutting	78	T11N R03E S22	
Vegetation management - Hand cutting	12	T12N R02E S27	
Vegetation management - Hand cutting	17	T12N R05E S18	
Vegetation management - Hand cutting	35	T12N R05E S18	
Vegetation management - Hand cutting	32	T12N R08E S10	
Vegetation management - Hand cutting	7	T12N R08E S19	
Vegetation management - Hand cutting	8	T12N R08E S19	
Vegetation management - Hand cutting	8	T13N R04E S36	
Vegetation management - Hand cutting	2	T13N R04E S36	
Vegetation management - Hand cutting	9	T13N R04E S36	
Pre-commercial thinning	99	T10N R06W S28	
Pre-commercial thinning	7	T11N R07W S19	
Pre-commercial thinning	3	T11N R07W S19	
Tree pruning - Hand pruning	30	T03N R06E S02	
<b>Klickitat Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Timber harvest - Clear cut	75	T03N R12E S05	2703328
Timber harvest - Clear cut	49	T03N R12E S08	2703328

Klickitat Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	15	T04N R10E S06	2703099
Timber harvest - Clear cut	10	T04N R10E S06	2703099
Timber harvest - Clear cut	60	T04N R10E S18	2703099
Timber harvest - Clear cut	38	T04N R12E S07	2702853
Timber harvest - Clear cut	10	T04N R12E S07	2702853
Timber harvest - Clear cut	24	T07N R12E S17	2702829
Timber harvest - Late rotation thinning	24	T04N R10E S27	2702636
Timber harvest - Late rotation thinning	86	T05N R11E S01	2702869
Timber harvest - Late rotation thinning	87	T06N R11E S20	2702869
Timber harvest - Salvage cut	148	T07N R11E S01	2702830
Timber harvest - Salvage cut	125	T07N R12E S05	2702829
Timber harvest - Salvage cut	153	T07N R12E S06	2702829
Timber harvest - Salvage cut	73	T07N R12E S07	2702829
Timber harvest - Salvage cut	24	T07N R12E S17	2702829
Timber harvest - Salvage cut	95	T07N R12E S18	2702830
Timber harvest - Selective product logging	132	T04N R11E S04	2703040
Timber harvest - Selective product logging	84	T04N R11E S06	2703040
Timber harvest - Smallwood thinning	275	T04N R10E S28	2702636
Forest site preparation - Ground mechanical	2	T07N R11E S01	
Forest site preparation - Ground mechanical	148	T07N R11E S01	
Forest site preparation - Ground mechanical	80	T07N R11E S01	
Forest site preparation - Ground mechanical	83	T07N R12E S05	
Forest site preparation - Ground mechanical	2	T07N R12E S05	
Forest site preparation - Ground mechanical	42	T07N R12E S06	
Forest site preparation - Ground mechanical	153	T07N R12E S06	
Forest site preparation - Ground mechanical	4	T07N R12E S06	
Forest site preparation - Ground mechanical	1	T07N R12E S06	
Forest site preparation - Ground mechanical	2	T07N R12E S06	
Forest site preparation - Ground mechanical	1	T07N R12E S06	
Forest site preparation - Ground mechanical	1	T07N R12E S07	
Forest site preparation - Ground mechanical	36	T07N R12E S07	
Forest site preparation - Ground mechanical	1	T07N R12E S07	
Forest site preparation - Ground mechanical	73	T07N R12E S07	
Forest site preparation - Ground mechanical	1	T07N R12E S09	
Forest site preparation - Ground mechanical	34	T07N R12E S09	

Klickitat Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest site preparation - Ground mechanical	1	T07N R12E S17	
Forest site preparation - Ground mechanical	9	T07N R12E S17	
Forest site preparation - Ground mechanical	1	T07N R12E S17	
Forest site preparation - Ground mechanical	24	T07N R12E S17	
Forest site preparation - Ground mechanical	1	T07N R12E S17	
Forest site preparation - Ground mechanical	24	T07N R12E S17	
Forest site preparation - Ground mechanical	1	T07N R12E S17	
Forest site preparation - Ground mechanical	16	T07N R12E S17	
Forest site preparation - Ground mechanical	95	T07N R12E S18	
Forest site preparation - Ground mechanical	2	T07N R12E S18	
Forest site preparation - Pile and burn	27	T07N R11E S01	
Forest site preparation - Pile and burn	49	T07N R12E S04	
Forest regeneration - Hand planting	10	T04N R10E S19	
Forest regeneration - Hand planting	10	T04N R12E S07	
Forest regeneration - Hand planting	38	T04N R12E S07	
Forest regeneration - Hand planting	11	T05N R10E S03	
Forest regeneration - Hand planting	10	T06N R10E S20	
Forest regeneration - Hand planting	80	T07N R11E S01	
Forest regeneration - Hand planting	148	T07N R11E S01	
Forest regeneration - Hand planting	12	T07N R11E S26	
Forest regeneration - Hand planting	13	T07N R11E S26	
Forest regeneration - Hand planting	29	T07N R11E S26	
Forest regeneration - Hand planting	49	T07N R12E S04	
Forest regeneration - Hand planting	125	T07N R12E S05	
Forest regeneration - Hand planting	4	T07N R12E S06	
Forest regeneration - Hand planting	153	T07N R12E S06	
Forest regeneration - Hand planting	42	T07N R12E S06	
Forest regeneration - Hand planting	36	T07N R12E S07	
Forest regeneration - Hand planting	73	T07N R12E S07	
Forest regeneration - Hand planting	34	T07N R12E S09	
Forest regeneration - Hand planting	24	T07N R12E S17	
Forest regeneration - Hand planting	9	T07N R12E S17	
Forest regeneration - Hand planting	16	T07N R12E S17	
Forest regeneration - Hand planting	24	T07N R12E S17	
Forest regeneration - Hand planting	95	T07N R12E S18	

<b>Klickitat Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Pre-commercial thinning	8	T03N R12E S05	
Pre-commercial thinning	49	T03N R12E S06	
Pre-commercial thinning	5	T03N R12E S08	
Pre-commercial thinning	4	T03N R12E S08	
Pre-commercial thinning	30	T04N R09E S25	
Pre-commercial thinning	14	T04N R09E S25	
Pre-commercial thinning	9	T04N R09E S25	
Pre-commercial thinning	16	T04N R09E S36	
Pre-commercial thinning	13	T04N R10E S18	
Pre-commercial thinning	47	T04N R10E S20	
Pre-commercial thinning	22	T04N R10E S21	
Pre-commercial thinning	58	T04N R10E S29	
Pre-commercial thinning	9	T04N R10E S30	
Pre-commercial thinning	21	T04N R10E S30	
Pre-commercial thinning	17	T04N R10E S31	
Pre-commercial thinning	6	T04N R10E S31	
Pre-commercial thinning	40	T04N R10E S31	
Pre-commercial thinning	60	T05N R10E S15	
Pre-commercial thinning	70	T06N R10E S07	
Pre-commercial thinning	33	T06N R12E S04	
Pre-commercial thinning	267	T07N R12E S34	
<b>North Puget Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Timber harvest - Clear cut	30	T23N R07E S05	2409508
Timber harvest - Clear cut	6	T23N R07E S06	2409508
Timber harvest - Clear cut	89	T26N R08E S19	2409586
Timber harvest - Clear cut	35	T26N R08E S20	2410400
Timber harvest - Clear cut	2	T26N R08E S20	2410400
Timber harvest - Clear cut	30	T26N R08E S20	2410400
Timber harvest - Clear cut	7	T27N R07E S35	2410397
Timber harvest - Clear cut	91	T28N R07E S02	2805790
Timber harvest - Clear cut	22	T28N R07E S14	2807758
Timber harvest - Clear cut	29	T28N R08E S01	2807265
Timber harvest - Clear cut	46	T28N R08E S02	2807265
Timber harvest - Clear cut	67	T28N R08E S16	2807541

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	36	T28N R09E S31	2807483
Timber harvest - Clear cut	11	T28N R09E S31	2807483
Timber harvest - Clear cut	93	T29N R07E S02	2806663
Timber harvest - Clear cut	56	T29N R07E S11	2807144
Timber harvest - Clear cut	94	T29N R07E S11	2806663
Timber harvest - Clear cut	24	T29N R07E S12	2806353
Timber harvest - Clear cut	61	T30N R07E S21	2807713
Timber harvest - Clear cut	45	T32N R07E S20	2806760
Timber harvest - Clear cut	35	T32N R07E S20	2806760
Timber harvest - Clear cut	19	T32N R07E S21	2806760
Timber harvest - Clear cut	48	T32N R08E S04	2807242
Timber harvest - Clear cut	54	T32N R08E S05	2807242
Timber harvest - Clear cut	11	T32N R09E S05	2807555
Timber harvest - Clear cut	48	T32N R09E S06	2807555
Timber harvest - Clear cut	33	T33N R05E S13	2807209
Timber harvest - Clear cut	65	T33N R05E S13	2807209
Timber harvest - Clear cut	68	T33N R05E S14	2807209
Timber harvest - Clear cut	52	T33N R05E S20	2806240
Timber harvest - Clear cut	80	T33N R05E S29	2806240
Timber harvest - Clear cut	5	T33N R05E S30	2806240
Timber harvest - Clear cut	22	T33N R06E S16	2807851
Timber harvest - Clear cut	12	T33N R06E S16	2807851
Timber harvest - Clear cut	16	T33N R06E S25	2805132
Timber harvest - Clear cut	21	T33N R06E S25	2805132
Timber harvest - Clear cut	72	T33N R06E S32	2807313
Timber harvest - Clear cut	28	T34N R05E S05	2807146
Timber harvest - Clear cut	66	T34N R05E S08	2807146
Timber harvest - Clear cut	46	T34N R05E S16	2807316
Timber harvest - Clear cut	45	T34N R05E S16	2807316
Timber harvest - Clear cut	63	T34N R06E S04	2806459
Timber harvest - Clear cut	59	T34N R06E S05	2806459
Timber harvest - Clear cut	32	T35N R04E S10	2807757
Timber harvest - Clear cut	40	T35N R04E S10	2807757
Timber harvest - Clear cut	53	T35N R05E S03	2806418
Timber harvest - Clear cut	29	T35N R06E S32	2806459



North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	14	T36N R05E S32	2807138
Timber harvest - Clear cut	36	T36N R05E S32	2807138
Timber harvest - Clear cut	80	T36N R05E S35	2807269
Timber harvest - Clear cut	33	T36N R06E S06	2807312
Timber harvest - Clear cut	44	T36N R06E S06	2807312
Timber harvest - Clear cut	2	T36N R06E S07	2807312
Timber harvest - Clear cut	59	T36N R06E S25	2806458
Timber harvest - Clear cut	49	T36N R06E S28	2807344
Timber harvest - Clear cut	20	T37N R04E S11	2807350
Timber harvest - Clear cut	57	T37N R05E S02	2807584
Timber harvest - Clear cut	4	T37N R05E S25	2807247
Timber harvest - Clear cut	17	T37N R05E S25	2807247
Timber harvest - Clear cut	31	T37N R05E S25	2807247
Timber harvest - Clear cut	21	T37N R05E S36	2807966
Timber harvest - Clear cut	15	T37N R05E S36	2807966
Timber harvest - Clear cut	7	T37N R05E S36	2807966
Timber harvest - Clear cut	26	T37N R05E S36	2807966
Timber harvest - Clear cut	68	T37N R06E S06	2807286
Timber harvest - Clear cut	95	T38N R06E S18	2807250
Timber harvest - Clear cut	86	T38N R06E S30	2807585
Timber harvest - Clear cut	11	T39N R05E S17	2807447
Timber harvest - Clear cut	46	T39N R05E S17	2807447
Timber harvest - Clear cut	69	T39N R05E S18	2805768
Timber harvest - Clear cut	54	T39N R05E S18	2807447
Timber harvest - Clear cut	79	T39N R05E S30	2805768
Timber harvest - Clear cut	50	T39N R06E S08	2807289
Timber harvest - Clear cut	95	T39N R06E S11	2806556
Timber harvest - Clear cut	41	T40N R05E S25	2807290
Timber harvest - Clear cut	99	T40N R05E S30	2807311
Timber harvest - Clear cut	99	T40N R05E S33	2807249
Timber harvest - Clear cut	72	T40N R06E S29	2807290
Timber harvest - Late rotation thinning	33	T29N R08E S07	2806664
Timber harvest - Late rotation thinning	17	T29N R08E S07	2806664
Timber harvest - Late rotation thinning	79	T29N R08E S17	2806664
Timber harvest - Late rotation thinning	59	T32N R06E S05	2805990

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Late rotation thinning	268	T33N R07E S36	2807159
Timber harvest - Late rotation thinning	60	T33N R10E S24	2807513
Timber harvest - Salvage cut	3	T36N R06E S07	2807312
Timber harvest - Uneven-aged management	31	T33N R10E S13	2807513
Timber harvest - Uneven-aged management	17	T33N R10E S24	2807513
Forest site preparation - Aerial herbicide	92	T28N R07E S04	2807648
Forest site preparation - Aerial herbicide	15	T28N R07E S16	2807648
Forest site preparation - Aerial herbicide	7	T28N R08E S03	2807648
Forest site preparation - Aerial herbicide	43	T28N R08E S03	2807648
Forest site preparation - Aerial herbicide	20	T28N R08E S10	2807648
Forest site preparation - Aerial herbicide	11	T28N R08E S11	2807648
Forest site preparation - Aerial herbicide	18	T28N R08E S11	2807648
Forest site preparation - Aerial herbicide	24	T28N R08E S12	2807648
Forest site preparation - Aerial herbicide	171	T28N R08E S14	2807648
Forest site preparation - Aerial herbicide	23	T28N R08E S14	2807648
Forest site preparation - Aerial herbicide	63	T28N R09E S29	2807648
Forest site preparation - Aerial herbicide	26	T28N R09E S32	2807648
Forest site preparation - Aerial herbicide	78	T29N R07E S10	2807648
Forest site preparation - Aerial herbicide	75	T29N R07E S33	2807648
Forest site preparation - Aerial herbicide	80	T29N R08E S33	2807648
Forest site preparation - Aerial herbicide	85	T32N R06E S13	2807648
Forest site preparation - Aerial herbicide	52	T32N R06E S15	2807648
Forest site preparation - Aerial herbicide	77	T32N R06E S22	2807648
Forest site preparation - Aerial herbicide	31	T32N R06E S22	2807648
Forest site preparation - Aerial herbicide	60	T32N R06E S23	2807648
Forest site preparation - Aerial herbicide	34	T32N R06E S23	2807648
Forest site preparation - Aerial herbicide	48	T32N R06E S24	2807648
Forest site preparation - Aerial herbicide	50	T32N R06E S25	2807648
Forest site preparation - Aerial herbicide	68	T32N R06E S26	2807648
Forest site preparation - Aerial herbicide	29	T32N R06E S26	2807648
Forest site preparation - Aerial herbicide	27	T33N R04E S12	2807648
Forest site preparation - Aerial herbicide	33	T33N R04E S12	2807648
Forest site preparation - Aerial herbicide	54	T33N R04E S12	2807648
Forest site preparation - Aerial herbicide	57	T33N R05E S10	2807648
Forest site preparation - Aerial herbicide	48	T33N R05E S15	2807648

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest site preparation - Aerial herbicide	14	T33N R05E S15	2807648
Forest site preparation - Aerial herbicide	22	T33N R05E S18	2807648
Forest site preparation - Aerial herbicide	24	T33N R05E S23	2807648
Forest site preparation - Aerial herbicide	7	T33N R07E S27	2807648
Forest site preparation - Aerial herbicide	3	T33N R07E S34	2807648
Forest site preparation - Aerial herbicide	45	T33N R07E S34	2807648
Forest site preparation - Aerial herbicide	28	T33N R07E S34	2807648
Forest site preparation - Aerial herbicide	53	T34N R05E S17	2807648
Forest site preparation - Aerial herbicide	37	T34N R05E S20	2807648
Forest site preparation - Aerial herbicide	4	T34N R09E S12	2807648
Forest site preparation - Aerial herbicide	6	T34N R09E S12	2807648
Forest site preparation - Aerial herbicide	15	T34N R09E S12	2807648
Forest site preparation - Aerial herbicide	74	T34N R09E S12	2807648
Forest site preparation - Aerial herbicide	75	T35N R06E S06	2807658
Forest site preparation - Aerial herbicide	30	T38N R05E S21	2807658
Forest site preparation - Aerial herbicide	28	T38N R05E S33	2807658
Forest site preparation - Aerial herbicide	69	T39N R05E S18	2807658
Forest site preparation - Aerial herbicide	60	T39N R05E S19	2807658
Forest site preparation - Aerial herbicide	28	T39N R05E S30	2807658
Forest site preparation - Aerial herbicide	17	T40N R05E S24	2807658
Forest site preparation - Aerial herbicide	43	T40N R06E S07	2807658
Forest site preparation - Ground herbicide	74	T37N R05E S05	
Forest site preparation - Ground herbicide	87	T37N R05E S10	
Forest site preparation - Ground herbicide	34	T37N R05E S32	
Forest site preparation - Ground herbicide	11	T37N R05E S32	
Forest site preparation - Ground herbicide	39	T38N R05E S14	
Forest site preparation - Ground herbicide	5	T38N R05E S26	
Forest site preparation - Ground herbicide	88	T38N R05E S27	
Forest site preparation - Ground herbicide	5	T38N R05E S36	
Forest site preparation - Ground herbicide	69	T39N R04E S15	
Forest site preparation - Ground herbicide	98	T39N R05E S18	
Forest site preparation - Ground herbicide	57	T39N R05E S28	
Forest site preparation - Ground herbicide	57	T40N R05E S29	
Forest regeneration - Hand planting	1	T23N R07E S05	
Forest regeneration - Hand planting	30	T23N R07E S05	

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	16	T23N R07E S05	
Forest regeneration - Hand planting	6	T23N R07E S06	
Forest regeneration - Hand planting	2	T26N R08E S05	
Forest regeneration - Hand planting	7	T26N R08E S05	
Forest regeneration - Hand planting	11	T26N R08E S05	
Forest regeneration - Hand planting	12	T26N R08E S05	
Forest regeneration - Hand planting	7	T26N R08E S05	
Forest regeneration - Hand planting	2	T26N R08E S05	
Forest regeneration - Hand planting	76	T26N R08E S05	
Forest regeneration - Hand planting	18	T26N R08E S08	
Forest regeneration - Hand planting	35	T26N R08E S08	
Forest regeneration - Hand planting	2	T26N R08E S17	
Forest regeneration - Hand planting	1	T26N R08E S17	
Forest regeneration - Hand planting	15	T26N R08E S17	
Forest regeneration - Hand planting	25	T26N R08E S17	
Forest regeneration - Hand planting	89	T26N R08E S19	
Forest regeneration - Hand planting	35	T26N R08E S20	
Forest regeneration - Hand planting	2	T26N R08E S20	
Forest regeneration - Hand planting	30	T26N R08E S20	
Forest regeneration - Hand planting	30	T27N R07E S08	
Forest regeneration - Hand planting	65	T27N R07E S17	
Forest regeneration - Hand planting	7	T27N R07E S35	
Forest regeneration - Hand planting	82	T28N R07E S02	
Forest regeneration - Hand planting	94	T28N R07E S04	
Forest regeneration - Hand planting	15	T28N R07E S16	
Forest regeneration - Hand planting	43	T28N R08E S03	
Forest regeneration - Hand planting	7	T28N R08E S03	
Forest regeneration - Hand planting	20	T28N R08E S10	
Forest regeneration - Hand planting	11	T28N R08E S11	
Forest regeneration - Hand planting	16	T28N R08E S11	
Forest regeneration - Hand planting	24	T28N R08E S12	
Forest regeneration - Hand planting	167	T28N R08E S14	
Forest regeneration - Hand planting	22	T28N R08E S14	
Forest regeneration - Hand planting	81	T28N R08E S21	
Forest regeneration - Hand planting	63	T28N R09E S29	

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	26	T28N R09E S32	
Forest regeneration - Hand planting	28	T29N R07E S03	
Forest regeneration - Hand planting	76	T29N R07E S10	
Forest regeneration - Hand planting	22	T29N R07E S12	
Forest regeneration - Hand planting	75	T29N R07E S33	
Forest regeneration - Hand planting	21	T29N R08E S18	
Forest regeneration - Hand planting	74	T29N R08E S27	
Forest regeneration - Hand planting	2	T29N R08E S27	
Forest regeneration - Hand planting	79	T29N R08E S33	
Forest regeneration - Hand planting	42	T30N R07E S34	
Forest regeneration - Hand planting	31	T31N R06E S11	
Forest regeneration - Hand planting	43	T31N R06E S12	
Forest regeneration - Hand planting	80	T31N R06E S26	
Forest regeneration - Hand planting	50	T31N R06E S26	
Forest regeneration - Hand planting	34	T31N R06E S35	
Forest regeneration - Hand planting	37	T32N R06E S05	
Forest regeneration - Hand planting	35	T32N R06E S06	
Forest regeneration - Hand planting	51	T32N R06E S15	
Forest regeneration - Hand planting	77	T32N R06E S22	
Forest regeneration - Hand planting	29	T32N R06E S22	
Forest regeneration - Hand planting	60	T32N R06E S23	
Forest regeneration - Hand planting	31	T32N R06E S23	
Forest regeneration - Hand planting	48	T32N R06E S24	
Forest regeneration - Hand planting	49	T32N R06E S25	
Forest regeneration - Hand planting	64	T32N R06E S26	
Forest regeneration - Hand planting	27	T32N R06E S26	
Forest regeneration - Hand planting	33	T33N R04E S12	
Forest regeneration - Hand planting	54	T33N R04E S12	
Forest regeneration - Hand planting	27	T33N R04E S12	
Forest regeneration - Hand planting	34	T33N R05E S04	
Forest regeneration - Hand planting	57	T33N R05E S10	
Forest regeneration - Hand planting	49	T33N R05E S15	
Forest regeneration - Hand planting	15	T33N R05E S15	
Forest regeneration - Hand planting	21	T33N R05E S18	
Forest regeneration - Hand planting	25	T33N R05E S23	

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	4	T33N R05E S30	
Forest regeneration - Hand planting	28	T33N R06E S04	
Forest regeneration - Hand planting	18	T33N R06E S04	
Forest regeneration - Hand planting	3	T33N R06E S04	
Forest regeneration - Hand planting	87	T33N R06E S05	
Forest regeneration - Hand planting	5	T33N R06E S25	
Forest regeneration - Hand planting	20	T33N R06E S25	
Forest regeneration - Hand planting	7	T33N R07E S27	
Forest regeneration - Hand planting	28	T33N R07E S34	
Forest regeneration - Hand planting	45	T33N R07E S34	
Forest regeneration - Hand planting	39	T34N R05E S16	
Forest regeneration - Hand planting	42	T34N R05E S16	
Forest regeneration - Hand planting	53	T34N R05E S17	
Forest regeneration - Hand planting	37	T34N R05E S20	
Forest regeneration - Hand planting	29	T34N R05E S33	
Forest regeneration - Hand planting	21	T34N R05E S34	
Forest regeneration - Hand planting	31	T34N R05E S34	
Forest regeneration - Hand planting	4	T34N R09E S12	
Forest regeneration - Hand planting	6	T34N R09E S12	
Forest regeneration - Hand planting	71	T34N R09E S12	
Forest regeneration - Hand planting	15	T34N R09E S12	
Forest regeneration - Hand planting	6	T35N R06E S02	
Forest regeneration - Hand planting	73	T35N R06E S06	
Forest regeneration - Hand planting	39	T36N R03E S15	
Forest regeneration - Hand planting	14	T36N R04E S09	
Forest regeneration - Hand planting	22	T36N R04E S09	
Forest regeneration - Hand planting	17	T36N R05E S08	
Forest regeneration - Hand planting	32	T36N R05E S34	
Forest regeneration - Hand planting	40	T36N R05E S35	
Forest regeneration - Hand planting	29	T36N R05E S35	
Forest regeneration - Hand planting	29	T36N R06E S06	
Forest regeneration - Hand planting	41	T36N R06E S06	
Forest regeneration - Hand planting	2	T36N R06E S07	
Forest regeneration - Hand planting	23	T36N R06E S07	
Forest regeneration - Hand planting	3	T36N R06E S07	

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	26	T36N R06E S16	
Forest regeneration - Hand planting	61	T36N R06E S16	
Forest regeneration - Hand planting	47	T36N R06E S21	
Forest regeneration - Hand planting	52	T36N R06E S25	
Forest regeneration - Hand planting	86	T36N R06E S26	
Forest regeneration - Hand planting	39	T36N R06E S28	
Forest regeneration - Hand planting	71	T37N R05E S05	
Forest regeneration - Hand planting	88	T37N R05E S10	
Forest regeneration - Hand planting	4	T37N R05E S25	
Forest regeneration - Hand planting	16	T37N R05E S25	
Forest regeneration - Hand planting	25	T37N R05E S25	
Forest regeneration - Hand planting	11	T37N R05E S32	
Forest regeneration - Hand planting	33	T37N R05E S32	
Forest regeneration - Hand planting	65	T37N R06E S06	
Forest regeneration - Hand planting	62	T37N R06E S19	
Forest regeneration - Hand planting	48	T37N R06E S32	
Forest regeneration - Hand planting	40	T38N R05E S14	
Forest regeneration - Hand planting	61	T38N R05E S16	
Forest regeneration - Hand planting	31	T38N R05E S21	
Forest regeneration - Hand planting	44	T38N R05E S21	
Forest regeneration - Hand planting	1	T38N R05E S21	
Forest regeneration - Hand planting	54	T38N R05E S21	
Forest regeneration - Hand planting	5	T38N R05E S26	
Forest regeneration - Hand planting	86	T38N R05E S27	
Forest regeneration - Hand planting	28	T38N R05E S33	
Forest regeneration - Hand planting	4	T38N R05E S36	
Forest regeneration - Hand planting	65	T39N R04E S15	
Forest regeneration - Hand planting	67	T39N R05E S18	
Forest regeneration - Hand planting	98	T39N R05E S18	
Forest regeneration - Hand planting	63	T39N R05E S19	
Forest regeneration - Hand planting	54	T39N R05E S28	
Forest regeneration - Hand planting	76	T39N R05E S30	
Forest regeneration - Hand planting	50	T39N R06E S08	
Forest regeneration - Hand planting	90	T39N R06E S11	
Forest regeneration - Hand planting	38	T40N R05E S04	

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	17	T40N R05E S24	
Forest regeneration - Hand planting	62	T40N R05E S29	
Forest regeneration - Hand planting	93	T40N R05E S30	
Forest regeneration - Hand planting	95	T40N R05E S33	
Forest regeneration - Hand planting	57	T40N R06E S07	
Vegetation management - Aerial herbicide	35	T38N R05E S24	2807658
Vegetation management - Aerial herbicide	9	T38N R05E S24	2807658
Vegetation management - Aerial herbicide	30	T39N R05E S12	2807658
Vegetation management - Ground herbicide	42	T23N R08E S06	
Vegetation management - Ground herbicide	31	T27N R07E S08	
Vegetation management - Ground herbicide	67	T27N R07E S17	
Vegetation management - Ground herbicide	31	T27N R07E S17	
Vegetation management - Ground herbicide	30	T27N R07E S29	
Vegetation management - Ground herbicide	42	T28N R07E S04	
Vegetation management - Ground herbicide	89	T29N R07E S02	
Vegetation management - Ground herbicide	91	T29N R07E S11	
Vegetation management - Ground herbicide	26	T30N R07E S21	
Vegetation management - Ground herbicide	58	T30N R07E S34	
Vegetation management - Ground herbicide	39	T31N R06E S16	
Vegetation management - Ground herbicide	39	T31N R06E S16	
Vegetation management - Ground herbicide	71	T32N R06E S02	
Vegetation management - Ground herbicide	71	T32N R06E S02	
Vegetation management - Ground herbicide	36	T32N R06E S08	
Vegetation management - Ground herbicide	65	T32N R07E S05	
Vegetation management - Ground herbicide	32	T32N R07E S22	
Vegetation management - Ground herbicide	6	T32N R09E S16	
Vegetation management - Ground herbicide	2	T32N R09E S16	
Vegetation management - Ground herbicide	5	T32N R09E S16	
Vegetation management - Ground herbicide	3	T32N R09E S21	
Vegetation management - Ground herbicide	1	T32N R09E S21	
Vegetation management - Ground herbicide	31	T32N R09E S21	
Vegetation management - Ground herbicide	40	T32N R09E S21	
Vegetation management - Ground herbicide	35	T33N R05E S15	
Vegetation management - Ground herbicide	56	T33N R05E S18	
Vegetation management - Ground herbicide	76	T33N R05E S25	



North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Ground herbicide	22	T33N R06E S20	
Vegetation management - Ground herbicide	48	T33N R06E S20	
Vegetation management - Ground herbicide	56	T33N R06E S20	
Vegetation management - Ground herbicide	37	T33N R06E S20	
Vegetation management - Ground herbicide	14	T33N R06E S21	
Vegetation management - Ground herbicide	30	T33N R06E S24	
Vegetation management - Ground herbicide	15	T33N R06E S25	
Vegetation management - Ground herbicide	8	T33N R06E S32	
Vegetation management - Ground herbicide	24	T34N R05E S09	
Vegetation management - Ground herbicide	6	T34N R05E S28	
Vegetation management - Ground herbicide	26	T34N R05E S33	
Vegetation management - Ground herbicide	34	T37N R05E S18	
Vegetation management - Ground herbicide	31	T38N R06E S19	
Vegetation management - Ground herbicide	23	T39N R05E S08	
Vegetation management - Ground herbicide	34	T40N R05E S12	
Vegetation management - Hand cutting	55	T27N R07E S08	
Vegetation management - Hand cutting	34	T27N R07E S17	
Vegetation management - Hand cutting	30	T27N R07E S29	
Vegetation management - Hand cutting	56	T27N R07E S30	
Vegetation management - Hand cutting	16	T27N R07E S35	
Vegetation management - Hand cutting	18	T27N R07E S36	
Vegetation management - Hand cutting	36	T28N R07E S08	
Vegetation management - Hand cutting	21	T28N R07E S13	
Vegetation management - Hand cutting	10	T28N R07E S13	
Vegetation management - Hand cutting	7	T28N R08E S36	
Vegetation management - Hand cutting	30	T28N R09E S29	
Vegetation management - Hand cutting	7	T32N R07E S20	
Vegetation management - Hand cutting	59	T32N R07E S20	
Vegetation management - Hand cutting	51	T32N R08E S09	
Vegetation management - Hand cutting	74	T33N R05E S13	
Vegetation management - Hand cutting	16	T33N R05E S14	
Vegetation management - Hand cutting	12	T33N R06E S18	
Vegetation management - Hand cutting	74	T35N R05E S01	
Vegetation management - Hand cutting	61	T35N R08E S01	
Vegetation management - Hand cutting	40	T35N R08E S01	

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Hand cutting	76	T35N R09E S06	
Vegetation management - Hand cutting	16	T36N R03E S02	
Vegetation management - Hand cutting	50	T36N R04E S15	
Vegetation management - Hand cutting	30	T36N R05E S19	
Vegetation management - Hand cutting	11	T36N R05E S30	
Vegetation management - Hand cutting	48	T36N R05E S30	
Vegetation management - Hand cutting	32	T36N R06E S21	
Vegetation management - Hand cutting	7	T36N R06E S36	
Vegetation management - Hand cutting	62	T36N R07E S28	
Vegetation management - Hand cutting	53	T36N R07E S34	
Vegetation management - Hand cutting	41	T37N R05E S09	
Vegetation management - Hand cutting	7	T37N R05E S32	
Vegetation management - Hand cutting	12	T37N R05E S33	
Vegetation management - Hand cutting	4	T37N R05E S33	
Vegetation management - Hand cutting	26	T37N R05E S33	
Vegetation management - Hand cutting	2	T38N R05E S10	
Vegetation management - Hand cutting	2	T38N R05E S15	
Vegetation management - Hand cutting	12	T38N R05E S25	
Vegetation management - Hand cutting	4	T38N R05E S36	
Vegetation management - Hand cutting	6	T38N R05E S36	
Vegetation management - Hand cutting	4	T38N R06E S22	
Vegetation management - Hand cutting	25	T38N R06E S27	
Vegetation management - Hand cutting	47	T39N R05E S12	
Vegetation management - Hand cutting	90	T40N R05E S16	
Vegetation management - Hand cutting	60	T40N R05E S17	
Vegetation management - Hand cutting	82	T40N R05E S17	
Vegetation management - Hand cutting	98	T40N R05E S20	
Vegetation management - Hand cutting	29	T40N R05E S32	
Vegetation management - Hand cutting	46	T40N R06E S31	
Pre-commercial thinning	42	T26N R07E S24	
Pre-commercial thinning	3	T26N R08E S07	
Pre-commercial thinning	3	T26N R08E S07	
Pre-commercial thinning	5	T26N R08E S07	
Pre-commercial thinning	3	T26N R08E S07	
Pre-commercial thinning	121	T29N R07E S06	

North Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Pre-commercial thinning	58	T31N R06E S11	
Pre-commercial thinning	40	T31N R06E S11	
Pre-commercial thinning	11	T31N R06E S12	
Pre-commercial thinning	4	T31N R06E S12	
Pre-commercial thinning	17	T31N R06E S13	
Pre-commercial thinning	28	T31N R06E S13	
Pre-commercial thinning	132	T31N R06E S25	
Pre-commercial thinning	3	T34N R05E S05	
Pre-commercial thinning	10	T34N R05E S08	
Pre-commercial thinning	15	T35N R06E S04	
Pre-commercial thinning	19	T35N R06E S04	
Pre-commercial thinning	36	T36N R04E S03	
Pre-commercial thinning	44	T36N R05E S20	
Pre-commercial thinning	63	T37N R04E S36	
Pre-commercial thinning	93	T37N R05E S18	
Pre-commercial thinning	6	T38N R05E S34	
Pre-commercial thinning	30	T39N R05E S08	
Pre-commercial thinning	60	T39N R05E S12	
OESF Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	15	T27N R10W S27	2606515
Timber harvest - Clear cut	26	T27N R10W S34	2606515
Timber harvest - Clear cut	14	T27N R10W S34	2606515
Timber harvest - Clear cut	25	T27N R10W S35	2606515
Timber harvest - Clear cut	2	T27N R12W S28	2606471
Timber harvest - Clear cut	3	T27N R12W S28	2606471
Timber harvest - Clear cut	1	T27N R12W S28	2606471
Timber harvest - Clear cut	2	T27N R12W S28	2606471
Timber harvest - Clear cut	17	T27N R12W S28	2606471
Timber harvest - Clear cut	17	T27N R12W S34	2606173
Timber harvest - Clear cut	12	T27N R12W S34	2606471
Timber harvest - Clear cut	23	T27N R12W S35	2606173
Timber harvest - Clear cut	1	T27N R12W S36	2606173
Timber harvest - Clear cut	10	T27N R13W S03	2606702
Timber harvest - Clear cut	26	T28N R13W S01	2606544

OESF Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	16	T28N R13W S01	2606544
Timber harvest - Clear cut	18	T28N R13W S02	2606544
Timber harvest - Clear cut	13	T28N R13W S02	2606544
Timber harvest - Clear cut	20	T28N R13W S02	2606544
Timber harvest - Clear cut	13	T29N R13W S01	2606192
Timber harvest - Clear cut	15	T29N R13W S01	2606192
Timber harvest - Clear cut	46	T29N R13W S12	2606192
Timber harvest - Clear cut	74	T29N R14W S16	2605120
Timber harvest - Clear cut	10	T29N R14W S16	2605120
Timber harvest - Clear cut	3	T29N R14W S16	2605120
Timber harvest - Clear cut	21	T29N R14W S16	2605120
Timber harvest - Clear cut	27	T30N R11W S36	2606472
Timber harvest - Clear cut	33	T30N R13W S04	2605729
Timber harvest - Clear cut	57	T30N R13W S05	2606401
Timber harvest - Clear cut	116	T30N R13W S17	2605880
Timber harvest - Clear cut	53	T31N R12W S09	2605899
Timber harvest - Clear cut	2	T31N R12W S16	2605899
Timber harvest - Clear cut	25	T31N R13W S21	2606401
Timber harvest - Clear cut	14	T32N R13W S35	2607324
Timber harvest - Smallwood thinning	78	T25N R11W S11	2604459
Timber harvest - Smallwood thinning	17	T28N R14W S21	2607008
Timber harvest - Smallwood thinning	20	T28N R14W S21	2607008
Timber harvest - Smallwood thinning	11	T28N R14W S21	2607008
Timber harvest - Temporary retention first cut	15	T31N R12W S09	2605899
Timber harvest - Temporary retention first cut	58	T31N R12W S16	2605899
Timber harvest - Variable density thinning	40	T31N R12W S16	2605899
Forest site preparation - Ground herbicide	7	T29N R13W S01	
Forest site preparation - Ground herbicide	6	T29N R13W S01	
Forest site preparation - Ground herbicide	75	T29N R13W S12	
Forest site preparation - Ground herbicide	21	T29N R14W S16	
Forest site preparation - Ground herbicide	74	T29N R14W S16	
Forest site preparation - Ground herbicide	27	T30N R11W S36	
Forest site preparation - Pile and burn	1	T31N R12W S09	
Forest site preparation - Pile and burn	1	T31N R12W S09	
Forest site preparation - Pile and burn	1	T31N R12W S16	

OESF Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest site preparation - Pile and burn	1	T31N R12W S16	
Forest regeneration - Hand planting	2	T26N R11W S28	
Forest regeneration - Hand planting	15	T27N R10W S27	
Forest regeneration - Hand planting	14	T27N R10W S34	
Forest regeneration - Hand planting	26	T27N R10W S34	
Forest regeneration - Hand planting	25	T27N R10W S35	
Forest regeneration - Hand planting	10	T27N R12W S16	
Forest regeneration - Hand planting	4	T27N R12W S19	
Forest regeneration - Hand planting	2	T27N R12W S28	
Forest regeneration - Hand planting	17	T27N R12W S28	
Forest regeneration - Hand planting	3	T27N R12W S28	
Forest regeneration - Hand planting	1	T27N R12W S28	
Forest regeneration - Hand planting	2	T27N R12W S28	
Forest regeneration - Hand planting	17	T27N R12W S34	
Forest regeneration - Hand planting	10	T27N R12W S34	
Forest regeneration - Hand planting	23	T27N R12W S35	
Forest regeneration - Hand planting	1	T27N R12W S36	
Forest regeneration - Hand planting	10	T27N R13W S03	
Forest regeneration - Hand planting	8	T28N R13W S02	
Forest regeneration - Hand planting	20	T28N R13W S02	
Forest regeneration - Hand planting	45	T28N R14W S21	
Forest regeneration - Hand planting	3	T29N R14W S16	
Forest regeneration - Hand planting	10	T29N R14W S16	
Forest regeneration - Hand planting	14	T30N R11W S27	
Forest regeneration - Hand planting	70	T30N R12W S33	
Forest regeneration - Hand planting	74	T30N R13W S17	
Forest regeneration - Hand planting	15	T31N R12W S09	
Forest regeneration - Hand planting	53	T31N R12W S09	
Forest regeneration - Hand planting	2	T31N R12W S16	
Forest regeneration - Hand planting	58	T31N R12W S16	
Vegetation management - Ground herbicide	66	T30N R11W S25	
Vegetation management - Ground herbicide	15	T31N R12W S09	
Vegetation management - Ground herbicide	13	T31N R12W S16	
Vegetation management - Ground herbicide	3	T31N R12W S16	
Vegetation management - Hand cutting	59	T30N R12W S28	

OESF Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Hand cutting	22	T30N R12W S30	
Vegetation management - Hand cutting	24	T32N R12W S36	
Vegetation management - Hand cutting	62	T32N R12W S36	
Vegetation management - Hand cutting	7	T32N R13W S36	
Vegetation management - Hand cutting	15	T32N R13W S36	
Vegetation management - Hand cutting	9	T32N R13W S36	
Vegetation management - Hand cutting	9	T32N R13W S36	
Pre-commercial thinning	41	T25N R10W S07	
Pre-commercial thinning	2	T25N R11W S06	
Pre-commercial thinning	7	T25N R11W S06	
Pre-commercial thinning	70	T25N R11W S06	
Pre-commercial thinning	19	T25N R11W S20	
Pre-commercial thinning	9	T25N R11W S20	
Pre-commercial thinning	68	T25N R11W S21	
Pre-commercial thinning	16	T25N R11W S26	
Pre-commercial thinning	41	T25N R11W S26	
Pre-commercial thinning	5	T25N R11W S29	
Pre-commercial thinning	109	T25N R11W S29	
Pre-commercial thinning	47	T25N R11W S30	
Pre-commercial thinning	5	T25N R11W S32	
Pre-commercial thinning	163	T25N R11W S33	
Pre-commercial thinning	2	T25N R12W S11	
Pre-commercial thinning	85	T25N R12W S11	
Pre-commercial thinning	1	T25N R12W S11	
Pre-commercial thinning	21	T25N R12W S16	
Pre-commercial thinning	47	T25N R12W S16	
Pre-commercial thinning	5	T25N R12W S17	
Pre-commercial thinning	84	T25N R12W S21	
Pre-commercial thinning	101	T25N R12W S21	
Pre-commercial thinning	7	T25N R12W S21	
Pre-commercial thinning	18	T25N R12W S21	
Pre-commercial thinning	86	T25N R12W S22	
Pre-commercial thinning	11	T25N R12W S31	
Pre-commercial thinning	16	T25N R13W S11	
Pre-commercial thinning	23	T25N R13W S26	

OESF Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Pre-commercial thinning	44	T25N R13W S26	
Pre-commercial thinning	84	T25N R13W S36	
Pre-commercial thinning	113	T26N R10W S06	
Pre-commercial thinning	134	T26N R10W S11	
Pre-commercial thinning	37	T26N R10W S14	
Pre-commercial thinning	67	T26N R10W S14	
Pre-commercial thinning	67	T26N R10W S15	
Pre-commercial thinning	16	T26N R10W S15	
Pre-commercial thinning	56	T26N R10W S15	
Pre-commercial thinning	40	T26N R10W S16	
Pre-commercial thinning	114	T26N R10W S16	
Pre-commercial thinning	24	T26N R10W S17	
Pre-commercial thinning	64	T26N R10W S21	
Pre-commercial thinning	41	T26N R10W S21	
Pre-commercial thinning	13	T26N R10W S26	
Pre-commercial thinning	124	T26N R10W S30	
Pre-commercial thinning	20	T26N R10W S31	
Pre-commercial thinning	36	T26N R11W S01	
Pre-commercial thinning	8	T26N R11W S02	
Pre-commercial thinning	11	T26N R11W S02	
Pre-commercial thinning	128	T26N R11W S07	
Pre-commercial thinning	71	T26N R11W S07	
Pre-commercial thinning	39	T26N R11W S09	
Pre-commercial thinning	34	T26N R11W S11	
Pre-commercial thinning	121	T26N R11W S17	
Pre-commercial thinning	68	T26N R11W S17	
Pre-commercial thinning	111	T26N R11W S25	
Pre-commercial thinning	58	T26N R12W S31	
Pre-commercial thinning	16	T26N R13W S16	
Pre-commercial thinning	161	T27N R10W S28	
Pre-commercial thinning	126	T27N R10W S33	
Pre-commercial thinning	5	T27N R11W S18	
Pre-commercial thinning	6	T27N R11W S18	
Pre-commercial thinning	89	T27N R11W S18	
Pre-commercial thinning	61	T27N R11W S19	

<b>OESF Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Pre-commercial thinning	41	T27N R11W S19	
Pre-commercial thinning	142	T27N R12W S14	
Pre-commercial thinning	51	T27N R13W S03	
Pre-commercial thinning	77	T27N R13W S03	
Pre-commercial thinning	49	T27N R13W S03	
Pre-commercial thinning	16	T27N R13W S04	
Pre-commercial thinning	32	T27N R13W S04	
Pre-commercial thinning	83	T27N R13W S05	
Pre-commercial thinning	9	T27N R13W S08	
Pre-commercial thinning	17	T27N R13W S14	
Pre-commercial thinning	5	T27N R13W S19	
Pre-commercial thinning	36	T27N R13W S21	
Pre-commercial thinning	43	T27N R13W S23	
Pre-commercial thinning	7	T28N R13W S15	
Pre-commercial thinning	23	T28N R13W S16	
Pre-commercial thinning	9	T28N R13W S16	
Pre-commercial thinning	3	T28N R13W S16	
Pre-commercial thinning	1	T28N R13W S16	
Pre-commercial thinning	9	T28N R13W S19	
Pre-commercial thinning	54	T28N R13W S19	
Pre-commercial thinning	13	T28N R13W S19	
Pre-commercial thinning	4	T28N R13W S22	
Pre-commercial thinning	76	T28N R13W S22	
Pre-commercial thinning	11	T28N R13W S27	
<b>South Coast Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Timber harvest - Clear cut	10	T13N R05W S08	2910090
Timber harvest - Clear cut	90	T13N R05W S08	2910090
Timber harvest - Clear cut	30	T13N R05W S31	2512171
Timber harvest - Clear cut	89	T13N R06W S29	2910652
Timber harvest - Clear cut	39	T13N R07W S10	2911518
Timber harvest - Clear cut	25	T13N R07W S10	2911518
Timber harvest - Clear cut	55	T13N R07W S14	2511727
Timber harvest - Clear cut	24	T13N R07W S22	2910833
Timber harvest - Clear cut	77	T13N R07W S27	2910833



South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	35	T13N R08W S23	2911246
Timber harvest - Clear cut	44	T13N R08W S23	2911246
Timber harvest - Clear cut	10	T15N R02W S01	2910568
Timber harvest - Clear cut	43	T15N R02W S02	2910568
Timber harvest - Clear cut	24	T15N R02W S16	2910089
Timber harvest - Clear cut	24	T15N R02W S16	2910089
Timber harvest - Clear cut	65	T15N R05W S02	2510411
Timber harvest - Clear cut	75	T15N R05W S03	2510240
Timber harvest - Clear cut	58	T15N R05W S03	2911545
Timber harvest - Clear cut	62	T16N R04W S07	2911451
Timber harvest - Clear cut	47	T16N R04W S09	2910506
Timber harvest - Clear cut	41	T16N R04W S11	2910505
Timber harvest - Clear cut	52	T16N R04W S14	2910505
Timber harvest - Clear cut	36	T16N R04W S18	2910506
Timber harvest - Clear cut	30	T16N R05W S32	2911545
Timber harvest - Clear cut	16	T17N R04W S03	2911251
Timber harvest - Clear cut	2	T17N R04W S03	2911251
Timber harvest - Clear cut	31	T17N R04W S03	2911251
Timber harvest - Clear cut	45	T17N R05W S12	2911251
Timber harvest - Clear cut	35	T17N R05W S36	2511992
Timber harvest - Clear cut	61	T18N R03W S33	2511187
Timber harvest - Clear cut	73	T18N R04W S26	2910764
Timber harvest - Clear cut	11	T18N R04W S26	2910764
Timber harvest - Clear cut	82	T18N R04W S27	2910764
Timber harvest - Clear cut	35	T19N R09W S16	2606742
Timber harvest - Clear cut	12	T19N R09W S16	2606742
Timber harvest - Clear cut	21	T19N R09W S16	2606742
Timber harvest - Clear cut	16	T19N R09W S16	2606742
Timber harvest - Clear cut	9	T19N R09W S16	2606742
Timber harvest - Clear cut	27	T20N R11W S36	2606742
Timber harvest - Clear cut	37	T20N R12W S10	2605904
Timber harvest - Clear cut	88	T20N R12W S12	2605904
Timber harvest - Clear cut	67	T20N R12W S12	2605904
Timber harvest - Clear cut	26	T20N R12W S16	2605904
Timber harvest - Clear cut	41	T20N R12W S16	2605904

South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	14	T20N R12W S22	2606742
Timber harvest - Clear cut	6	T20N R12W S22	2606742
Timber harvest - Clear cut	3	T20N R12W S22	2606742
Timber harvest - Clear cut	54	T21N R09W S16	2606357
Timber harvest - Clear cut	40	T21N R09W S16	2606357
Timber harvest - Clear cut	57	T21N R10W S36	2606193
Timber harvest - Late rotation thinning	82	T16N R04W S01	2511605
Timber harvest - Late rotation thinning	121	T17N R04W S05	2910687
Timber harvest - Late rotation thinning	21	T17N R04W S31	2911570
Timber harvest - Late rotation thinning	7	T18N R04W S31	2510507
Timber harvest - Late rotation thinning	104	T18N R04W S31	2510507
Timber harvest - Salvage cut	29	T13N R08W S32	2911263
Timber harvest - Salvage cut	4	T13N R08W S32	2911263
Timber harvest - Smallwood thinning	284	T12N R03W S15	2511767
Timber harvest - Smallwood thinning	38	T20N R12W S23	2605731
Forest site preparation - Aerial herbicide	28	T13N R05W S31	2911657
Forest site preparation - Aerial herbicide	66	T15N R05W S02	2911656
Forest site preparation - Aerial herbicide	24	T16N R04W S03	2911656
Forest site preparation - Aerial herbicide	45	T16N R04W S15	2911656
Forest site preparation - Aerial herbicide	52	T16N R04W S15	2911656
Forest site preparation - Aerial herbicide	29	T16N R04W S21	2911656
Forest site preparation - Aerial herbicide	39	T16N R04W S21	2911656
Forest site preparation - Aerial herbicide	34	T16N R05W S32	2911656
Forest site preparation - Aerial herbicide	72	T16N R05W S33	2911656
Forest site preparation - Aerial herbicide	74	T16N R05W S33	2911656
Forest site preparation - Aerial herbicide	29	T16N R05W S33	2911656
Forest site preparation - Aerial herbicide	39	T16N R05W S34	2911656
Forest site preparation - Aerial herbicide	69	T17N R03W S29	2911656
Forest site preparation - Aerial herbicide	37	T17N R04W S32	2911656
Forest site preparation - Ground herbicide	16	T12N R03W S16	
Forest site preparation - Ground herbicide	24	T12N R03W S22	
Forest site preparation - Ground herbicide	60	T12N R03W S22	
Forest site preparation - Ground herbicide	11	T14N R04W S12	
Forest site preparation - Ground herbicide	5	T14N R04W S12	
Forest site preparation - Ground herbicide	3	T14N R04W S12	

South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest site preparation - Ground herbicide	11	T14N R04W S12	
Forest site preparation - Ground herbicide	1	T20N R12W S27	
Forest site preparation - Ground herbicide	10	T20N R12W S27	
Forest site preparation - Ground herbicide	7	T20N R12W S27	
Forest site preparation - Ground herbicide	57	T21N R10W S36	
Forest site preparation - Pile and burn	16	T12N R03W S16	
Forest site preparation - Pile and burn	10	T12N R08W S04	
Forest site preparation - Pile and burn	15	T12N R08W S04	
Forest site preparation - Pile and burn	2	T13N R06W S30	
Forest site preparation - Pile and burn	2	T13N R06W S34	
Forest site preparation - Pile and burn	28	T13N R06W S35	
Forest site preparation - Pile and burn	25	T13N R06W S36	
Forest site preparation - Pile and burn	50	T13N R06W S36	
Forest site preparation - Pile and burn	3	T13N R07W S14	
Forest site preparation - Pile and burn	8	T13N R07W S22	
Forest site preparation - Pile and burn	4	T13N R07W S29	
Forest site preparation - Pile and burn	8	T13N R07W S31	
Forest site preparation - Pile and burn	2	T13N R08W S05	
Forest site preparation - Pile and burn	42	T13N R08W S08	
Forest site preparation - Pile and burn	32	T13N R08W S28	
Forest site preparation - Pile and burn	30	T13N R08W S33	
Forest regeneration - Hand planting	12	T12N R03W S16	
Forest regeneration - Hand planting	58	T12N R03W S22	
Forest regeneration - Hand planting	24	T12N R03W S22	
Forest regeneration - Hand planting	89	T12N R08W S04	
Forest regeneration - Hand planting	50	T12N R08W S04	
Forest regeneration - Hand planting	10	T13N R05W S08	
Forest regeneration - Hand planting	90	T13N R05W S08	
Forest regeneration - Hand planting	30	T13N R05W S31	
Forest regeneration - Hand planting	4	T13N R06W S23	
Forest regeneration - Hand planting	87	T13N R06W S30	
Forest regeneration - Hand planting	11	T13N R06W S34	
Forest regeneration - Hand planting	43	T13N R06W S35	
Forest regeneration - Hand planting	10	T13N R06W S36	
Forest regeneration - Hand planting	25	T13N R06W S36	

South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	55	T13N R07W S14	
Forest regeneration - Hand planting	76	T13N R07W S22	
Forest regeneration - Hand planting	69	T13N R07W S23	
Forest regeneration - Hand planting	44	T13N R07W S24	
Forest regeneration - Hand planting	48	T13N R07W S29	
Forest regeneration - Hand planting	83	T13N R07W S31	
Forest regeneration - Hand planting	45	T13N R08W S05	
Forest regeneration - Hand planting	42	T13N R08W S08	
Forest regeneration - Hand planting	73	T13N R08W S16	
Forest regeneration - Hand planting	36	T13N R08W S28	
Forest regeneration - Hand planting	41	T13N R08W S29	
Forest regeneration - Hand planting	10	T13N R08W S32	
Forest regeneration - Hand planting	71	T13N R08W S33	
Forest regeneration - Hand planting	3	T14N R04W S12	
Forest regeneration - Hand planting	10	T14N R04W S12	
Forest regeneration - Hand planting	9	T14N R04W S12	
Forest regeneration - Hand planting	5	T14N R04W S12	
Forest regeneration - Hand planting	66	T15N R05W S02	
Forest regeneration - Hand planting	20	T16N R01W S32	
Forest regeneration - Hand planting	6	T16N R03W S04	
Forest regeneration - Hand planting	24	T16N R04W S03	
Forest regeneration - Hand planting	40	T16N R04W S11	
Forest regeneration - Hand planting	55	T16N R04W S15	
Forest regeneration - Hand planting	45	T16N R04W S15	
Forest regeneration - Hand planting	29	T16N R04W S21	
Forest regeneration - Hand planting	39	T16N R04W S21	
Forest regeneration - Hand planting	34	T16N R05W S32	
Forest regeneration - Hand planting	73	T16N R05W S33	
Forest regeneration - Hand planting	75	T16N R05W S33	
Forest regeneration - Hand planting	29	T16N R05W S33	
Forest regeneration - Hand planting	37	T16N R05W S34	
Forest regeneration - Hand planting	1	T17N R03W S28	
Forest regeneration - Hand planting	69	T17N R03W S29	
Forest regeneration - Hand planting	27	T17N R04W S04	
Forest regeneration - Hand planting	2	T17N R04W S18	

South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	2	T17N R04W S19	
Forest regeneration - Hand planting	8	T17N R04W S19	
Forest regeneration - Hand planting	3	T17N R04W S20	
Forest regeneration - Hand planting	37	T17N R04W S32	
Forest regeneration - Hand planting	35	T17N R05W S36	
Forest regeneration - Hand planting	67	T18N R03W S29	
Forest regeneration - Hand planting	50	T18N R03W S29	
Forest regeneration - Hand planting	34	T18N R04W S25	
Forest regeneration - Hand planting	11	T18N R04W S26	
Forest regeneration - Hand planting	35	T18N R04W S26	
Forest regeneration - Hand planting	8	T18N R04W S26	
Forest regeneration - Hand planting	56	T18N R04W S27	
Forest regeneration - Hand planting	2	T18N R04W S36	
Forest regeneration - Hand planting	87	T20N R12W S12	
Forest regeneration - Hand planting	66	T20N R12W S12	
Vegetation management - Aerial herbicide	90	T12N R03W S16	1254789
Vegetation management - Aerial herbicide	23	T13N R05W S15	2911657
Vegetation management - Aerial herbicide	30	T13N R05W S16	2911657
Vegetation management - Aerial herbicide	85	T13N R06W S23	2912776
Vegetation management - Aerial herbicide	26	T13N R06W S24	2911657
Vegetation management - Aerial herbicide	32	T13N R06W S24	2911657
Vegetation management - Aerial herbicide	54	T13N R07W S12	2912776
Vegetation management - Aerial herbicide	40	T13N R07W S36	2912776
Vegetation management - Aerial herbicide	27	T13N R07W S36	2912776
Vegetation management - Aerial herbicide	30	T13N R07W S36	2912776
Vegetation management - Aerial herbicide	94	T15N R01E S08	2911656
Vegetation management - Aerial herbicide	71	T15N R01E S08	2911656
Vegetation management - Aerial herbicide	32	T15N R01E S08	2911656
Vegetation management - Aerial herbicide	57	T15N R01E S09	2911656
Vegetation management - Aerial herbicide	53	T15N R01W S03	2911656
Vegetation management - Aerial herbicide	78	T15N R05W S04	2911656
Vegetation management - Aerial herbicide	20	T16N R01W S32	2911656
Vegetation management - Aerial herbicide	39	T16N R01W S33	2911656
Vegetation management - Aerial herbicide	39	T16N R01W S33	2911656
Vegetation management - Aerial herbicide	10	T16N R01W S33	2911656

South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Aerial herbicide	27	T16N R01W S36	2911656
Vegetation management - Aerial herbicide	92	T16N R01W S36	2911656
Vegetation management - Aerial herbicide	35	T16N R04W S11	2911656
Vegetation management - Aerial herbicide	37	T17N R04W S26	2911656
Vegetation management - Ground herbicide	60	T11N R09W S29	
Vegetation management - Ground herbicide	21	T13N R05W S20	
Vegetation management - Ground herbicide	39	T14N R03W S09	
Vegetation management - Ground herbicide	16	T14N R03W S16	
Vegetation management - Ground herbicide	75	T14N R04W S02	
Vegetation management - Ground herbicide	55	T14N R04W S12	
Vegetation management - Ground herbicide	21	T14N R04W S25	
Vegetation management - Ground herbicide	50	T15N R03W S31	
Vegetation management - Ground herbicide	82	T15N R04W S36	
Vegetation management - Ground herbicide	36	T16N R01W S29	
Vegetation management - Ground herbicide	7	T16N R03W S07	
Vegetation management - Ground herbicide	36	T16N R04W S03	
Vegetation management - Ground herbicide	47	T16N R04W S23	
Vegetation management - Ground herbicide	29	T17N R03W S09	
Vegetation management - Ground herbicide	27	T17N R03W S20	
Vegetation management - Ground herbicide	19	T17N R03W S33	
Vegetation management - Ground herbicide	22	T17N R04W S26	
Vegetation management - Ground herbicide	7	T17N R04W S26	
Vegetation management - Ground herbicide	10	T17N R04W S33	
Vegetation management - Ground herbicide	25	T18N R04W S19	
Vegetation management - Ground herbicide	47	T20N R10W S36	
Vegetation management - Hand cutting	10	T12N R01W S03	
Vegetation management - Hand cutting	36	T13N R05W S21	
Vegetation management - Hand cutting	27	T13N R05W S22	
Vegetation management - Hand cutting	42	T13N R05W S22	
Vegetation management - Hand cutting	28	T13N R05W S22	
Vegetation management - Hand cutting	10	T13N R06W S12	
Vegetation management - Hand cutting	19	T13N R06W S12	
Vegetation management - Hand cutting	25	T13N R06W S13	
Vegetation management - Hand cutting	15	T13N R06W S13	
Vegetation management - Hand cutting	13	T13N R06W S13	

South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Hand cutting	9	T13N R06W S13	
Vegetation management - Hand cutting	21	T13N R06W S14	
Vegetation management - Hand cutting	45	T13N R06W S14	
Vegetation management - Hand cutting	19	T13N R06W S24	
Vegetation management - Hand cutting	17	T13N R06W S25	
Vegetation management - Hand cutting	22	T13N R06W S25	
Vegetation management - Hand cutting	97	T13N R07W S02	
Vegetation management - Hand cutting	87	T13N R07W S11	
Vegetation management - Hand cutting	56	T13N R07W S36	
Vegetation management - Hand cutting	39	T13N R08W S13	
Vegetation management - Hand cutting	49	T13N R08W S17	
Vegetation management - Hand cutting	18	T13N R08W S17	
Vegetation management - Hand cutting	23	T13N R08W S17	
Vegetation management - Hand cutting	40	T13N R08W S18	
Vegetation management - Hand cutting	69	T13N R08W S20	
Vegetation management - Hand cutting	6	T13N R08W S21	
Vegetation management - Hand cutting	3	T13N R08W S21	
Vegetation management - Hand cutting	21	T13N R08W S29	
Vegetation management - Hand cutting	72	T13N R08W S29	
Vegetation management - Hand cutting	20	T13N R08W S29	
Vegetation management - Hand cutting	5	T13N R08W S29	
Vegetation management - Hand cutting	45	T13N R08W S36	
Vegetation management - Hand cutting	159	T14N R03W S08	
Vegetation management - Hand cutting	40	T14N R04W S12	
Vegetation management - Hand cutting	29	T14N R05W S01	
Vegetation management - Hand cutting	36	T14N R05W S22	
Vegetation management - Hand cutting	98	T15N R01E S05	
Vegetation management - Hand cutting	5	T15N R01E S09	
Vegetation management - Hand cutting	27	T15N R03W S32	
Vegetation management - Hand cutting	55	T15N R04W S18	
Vegetation management - Hand cutting	33	T16N R01W S22	
Vegetation management - Hand cutting	11	T16N R01W S27	
Vegetation management - Hand cutting	4	T16N R01W S29	
Vegetation management - Hand cutting	36	T16N R01W S29	
Vegetation management - Hand cutting	63	T16N R01W S34	

South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Hand cutting	30	T16N R03W S05	
Vegetation management - Hand cutting	25	T16N R03W S06	
Vegetation management - Hand cutting	56	T16N R04W S04	
Vegetation management - Hand cutting	20	T16N R04W S04	
Vegetation management - Hand cutting	24	T16N R04W S05	
Vegetation management - Hand cutting	47	T16N R04W S06	
Vegetation management - Hand cutting	17	T16N R04W S08	
Vegetation management - Hand cutting	8	T16N R04W S19	
Vegetation management - Hand cutting	47	T16N R05W S11	
Vegetation management - Hand cutting	46	T16N R05W S11	
Vegetation management - Hand cutting	4	T16N R05W S31	
Vegetation management - Hand cutting	39	T16N R05W S31	
Vegetation management - Hand cutting	20	T16N R05W S31	
Vegetation management - Hand cutting	26	T17N R03W S04	
Vegetation management - Hand cutting	32	T17N R03W S17	
Vegetation management - Hand cutting	27	T17N R03W S18	
Vegetation management - Hand cutting	6	T17N R03W S18	
Vegetation management - Hand cutting	18	T17N R03W S20	
Vegetation management - Hand cutting	7	T17N R03W S20	
Vegetation management - Hand cutting	13	T17N R03W S20	
Vegetation management - Hand cutting	14	T17N R03W S28	
Vegetation management - Hand cutting	25	T17N R03W S28	
Vegetation management - Hand cutting	14	T17N R03W S28	
Vegetation management - Hand cutting	2	T17N R03W S29	
Vegetation management - Hand cutting	10	T17N R03W S29	
Vegetation management - Hand cutting	23	T17N R03W S31	
Vegetation management - Hand cutting	52	T17N R03W S32	
Vegetation management - Hand cutting	66	T17N R04W S27	
Vegetation management - Hand cutting	74	T17N R04W S27	
Vegetation management - Hand cutting	5	T17N R04W S32	
Vegetation management - Hand cutting	38	T17N R04W S33	
Vegetation management - Hand cutting	11	T17N R04W S36	
Vegetation management - Hand cutting	58	T17N R05W S01	
Vegetation management - Hand cutting	79	T17N R05W S14	
Vegetation management - Hand cutting	19	T17N R05W S25	



South Coast Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Hand cutting	11	T17N R05W S26	
Vegetation management - Hand cutting	14	T17N R06W S25	
Vegetation management - Hand cutting	3	T17N R06W S25	
Vegetation management - Hand cutting	41	T17N R06W S36	
Vegetation management - Hand cutting	68	T18N R03W S28	
Vegetation management - Hand cutting	35	T18N R05W S36	
Vegetation management - Hand cutting	79	T18N R05W S36	
Vegetation management - Underburning	1	T19N R12W S10	
Pre-commercial thinning	28	T13N R06W S32	
Pre-commercial thinning	82	T13N R06W S32	
Pre-commercial thinning	8	T13N R06W S35	
Pre-commercial thinning	118	T14N R03W S05	
Pre-commercial thinning	10	T14N R09W S12	
Pre-commercial thinning	27	T15N R05W S35	
Pre-commercial thinning	113	T15N R05W S35	
Pre-commercial thinning	62	T17N R04W S35	
Pre-commercial thinning	9	T17N R06W S36	
Pre-commercial thinning	91	T18N R04W S30	
Pre-commercial thinning	6	T18N R04W S33	
South Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	68	T15N R06E S06	2410291
Timber harvest - Clear cut	29	T15N R06E S17	2409799
Timber harvest - Clear cut	4	T16N R01E S11	2511815
Timber harvest - Clear cut	71	T16N R01E S11	2511815
Timber harvest - Clear cut	5	T18N R03W S33	2511187
Timber harvest - Clear cut	99	T22N R03W S13	2410350
Timber harvest - Clear cut	91	T22N R03W S17	2410229
Timber harvest - Clear cut	78	T23N R02W S27	2409797
Timber harvest - Clear cut	42	T23N R02W S29	2410501
Timber harvest - Clear cut	32	T23N R02W S29	2410501
Timber harvest - Clear cut	39	T23N R02W S32	2410501
Timber harvest - Clear cut	14	T23N R03W S36	2410501
Timber harvest - Clear cut	46	T23N R03W S36	2410501
Timber harvest - Clear cut	49	T23N R07E S19	2410070

South Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	63	T24N R01W S04	2410221
Timber harvest - Clear cut	23	T24N R01W S10	2410221
Timber harvest - Clear cut	3	T24N R01W S10	2410221
Timber harvest - Clear cut	19	T24N R01W S10	2410221
Timber harvest - Phased patch regeneration cut	6	T18N R03W S18	2910207
Timber harvest - Phased patch regeneration cut	26	T18N R03W S18	2910207
Timber harvest - Phased patch regeneration cut	15	T18N R03W S18	2910207
Timber harvest - Phased patch regeneration cut	10	T18N R03W S18	2910207
Timber harvest - Salvage cut	50	T22N R07E S36	2410090
Timber harvest - Salvage cut	7	T22N R07E S36	2410090
Timber harvest - Salvage cut	23	T22N R07E S36	2410090
Timber harvest - Selective product logging	715	T23N R02W S25	2409016
Timber harvest - Shelterwood intermediate cut	5	T15N R05E S01	2410291
Timber harvest - Variable density thinning	69	T15N R06E S17	2409799
Timber harvest - Variable density thinning	11	T15N R06E S17	2409799
Forest site preparation - Aerial herbicide	76	T18N R03W S09	2911656
Forest site preparation - Ground herbicide	6	T18N R03W S18	
Forest site preparation - Ground herbicide	88	T18N R04W S15	
Forest site preparation - Ground herbicide	29	T18N R04W S24	
Forest site preparation - Ground herbicide	10	T18N R04W S24	
Forest site preparation - Pile and burn	1	T16N R01E S30	
Forest regeneration - Hand planting	9	T14N R06E S05	
Forest regeneration - Hand planting	13	T14N R06E S05	
Forest regeneration - Hand planting	10	T14N R06E S05	
Forest regeneration - Hand planting	97	T14N R06E S05	
Forest regeneration - Hand planting	12	T14N R06E S08	
Forest regeneration - Hand planting	14	T14N R06E S08	
Forest regeneration - Hand planting	5	T14N R06E S08	
Forest regeneration - Hand planting	3	T14N R06E S17	
Forest regeneration - Hand planting	3	T14N R06E S17	
Forest regeneration - Hand planting	6	T14N R06E S18	
Forest regeneration - Hand planting	18	T15N R05E S02	
Forest regeneration - Hand planting	74	T15N R05E S03	
Forest regeneration - Hand planting	96	T15N R05E S05	
Forest regeneration - Hand planting	99	T15N R05E S09	

South Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	5	T15N R05E S10	
Forest regeneration - Hand planting	44	T15N R05E S12	
Forest regeneration - Hand planting	58	T15N R05E S14	
Forest regeneration - Hand planting	46	T15N R05E S15	
Forest regeneration - Hand planting	8	T15N R06E S08	
Forest regeneration - Hand planting	3	T15N R06E S19	
Forest regeneration - Hand planting	74	T15N R06E S20	
Forest regeneration - Hand planting	41	T15N R06E S20	
Forest regeneration - Hand planting	65	T16N R01E S11	
Forest regeneration - Hand planting	4	T16N R01E S11	
Forest regeneration - Hand planting	15	T16N R01E S16	
Forest regeneration - Hand planting	31	T16N R01E S30	
Forest regeneration - Hand planting	7	T16N R01E S30	
Forest regeneration - Hand planting	55	T16N R05E S32	
Forest regeneration - Hand planting	12	T16N R05E S32	
Forest regeneration - Hand planting	61	T18N R03W S03	
Forest regeneration - Hand planting	61	T18N R03W S05	
Forest regeneration - Hand planting	25	T18N R03W S08	
Forest regeneration - Hand planting	78	T18N R03W S09	
Forest regeneration - Hand planting	3	T18N R03W S15	
Forest regeneration - Hand planting	2	T18N R03W S15	
Forest regeneration - Hand planting	5	T18N R03W S15	
Forest regeneration - Hand planting	15	T18N R03W S18	
Forest regeneration - Hand planting	6	T18N R03W S18	
Forest regeneration - Hand planting	47	T18N R03W S22	
Forest regeneration - Hand planting	24	T18N R03W S22	
Forest regeneration - Hand planting	6	T18N R03W S29	
Forest regeneration - Hand planting	85	T18N R04W S15	
Forest regeneration - Hand planting	29	T18N R04W S24	
Forest regeneration - Hand planting	10	T18N R04W S24	
Forest regeneration - Hand planting	2	T21N R07E S20	
Forest regeneration - Hand planting	10	T21N R07E S20	
Forest regeneration - Hand planting	3	T21N R07E S20	
Forest regeneration - Hand planting	91	T22N R02W S04	
Forest regeneration - Hand planting	17	T22N R02W S09	

South Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	10	T22N R02W S09	
Forest regeneration - Hand planting	24	T22N R02W S18	
Forest regeneration - Hand planting	96	T22N R03W S13	
Forest regeneration - Hand planting	29	T22N R03W S17	
Forest regeneration - Hand planting	88	T22N R03W S17	
Forest regeneration - Hand planting	23	T22N R07E S36	
Forest regeneration - Hand planting	50	T22N R07E S36	
Forest regeneration - Hand planting	93	T23N R02W S22	
Forest regeneration - Hand planting	4	T23N R02W S23	
Forest regeneration - Hand planting	75	T23N R02W S27	
Forest regeneration - Hand planting	49	T23N R07E S19	
Forest regeneration - Hand planting	63	T24N R01W S04	
Forest regeneration - Hand planting	63	T24N R01W S08	
Forest regeneration - Hand planting	23	T24N R01W S10	
Forest regeneration - Hand planting	3	T24N R01W S10	
Forest regeneration - Hand planting	19	T24N R01W S10	
Vegetation management - Aerial herbicide	26	T16N R01W S36	2911656
Vegetation management - Aerial herbicide	50	T18N R04W S14	2911656
Vegetation management - Ground herbicide	37	T16N R01E S16	
Vegetation management - Ground herbicide	10	T18N R04W S14	
Vegetation management - Ground herbicide	10	T18N R04W S14	
Vegetation management - Ground herbicide	18	T23N R07E S30	
Vegetation management - Ground herbicide	13	T23N R07E S30	
Vegetation management - Ground herbicide	28	T23N R07E S30	
Vegetation management - Ground herbicide	23	T23N R07E S30	
Vegetation management - Hand cutting	53	T14N R06E S02	
Vegetation management - Hand cutting	10	T14N R06E S05	
Vegetation management - Hand cutting	54	T14N R06E S07	
Vegetation management - Hand cutting	10	T14N R06E S08	
Vegetation management - Hand cutting	14	T15N R05E S01	
Vegetation management - Hand cutting	12	T15N R06E S07	
Vegetation management - Hand cutting	20	T15N R06E S28	
Vegetation management - Hand cutting	18	T15N R06E S34	
Vegetation management - Hand cutting	5	T17N R03W S03	
Vegetation management - Hand cutting	25	T18N R03W S14	

South Puget Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Vegetation management - Hand cutting	2	T18N R03W S14	
Vegetation management - Hand cutting	17	T18N R03W S19	
Vegetation management - Hand cutting	15	T18N R04W S13	
Vegetation management - Hand cutting	40	T18N R04W S14	
Vegetation management - Hand cutting	41	T18N R04W S14	
Vegetation management - Hand cutting	20	T21N R01W S06	
Vegetation management - Hand cutting	30	T22N R01W S31	
Vegetation management - Hand cutting	10	T22N R02W S05	
Vegetation management - Hand cutting	65	T22N R03W S21	
Vegetation management - Hand cutting	13	T23N R01E S36	
Vegetation management - Hand cutting	28	T23N R01E S36	
Vegetation management - Hand cutting	16	T23N R01E S36	
Vegetation management - Hand cutting	25	T23N R01E S36	
Vegetation management - Hand cutting	12	T23N R01W S30	
Vegetation management - Hand cutting	14	T23N R02W S11	
Vegetation management - Hand cutting	7	T23N R02W S13	
Vegetation management - Hand cutting	10	T23N R02W S34	
Vegetation management - Hand cutting	15	T23N R02W S34	
Vegetation management - Hand cutting	71	T23N R07E S19	
Vegetation management - Hand cutting	1	T24N R01W S17	
Vegetation management - Hand cutting	2	T24N R01W S18	
Vegetation management - Hand cutting	10	T24N R01W S18	
Vegetation management - Hand cutting	7	T24N R01W S18	
Vegetation management - Hand cutting	41	T24N R01W S20	
Vegetation management - Hand cutting	15	T24N R02W S13	
Vegetation management - Hand cutting	2	T24N R02W S15	
Vegetation management - Hand cutting	50	T25N R01W S28	
Vegetation management - Hand cutting	54	T25N R01W S28	
Vegetation management - Hand cutting	18	T25N R01W S28	
Straits Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	81	T23N R04W S01	2410659
Timber harvest - Clear cut	76	T23N R04W S14	2410637
Timber harvest - Clear cut	86	T23N R04W S15	2410401
Timber harvest - Clear cut	70	T23N R04W S22	2410401

Straits Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Clear cut	22	T23N R04W S24	2410637
Timber harvest - Clear cut	78	T23N R04W S25	2410401
Timber harvest - Clear cut	9	T23N R04W S26	2410401
Timber harvest - Clear cut	52	T23N R04W S26	2410401
Timber harvest - Clear cut	79	T24N R03W S31	2410284
Timber harvest - Clear cut	55	T26N R01W S16	2605905
Timber harvest - Clear cut	76	T26N R01W S33	2605905
Timber harvest - Clear cut	1	T26N R01W S33	2605905
Timber harvest - Clear cut	8	T26N R01W S33	2605905
Timber harvest - Clear cut	101	T28N R01W S33	2606335
Timber harvest - Clear cut	82	T28N R02W S01	2606455
Timber harvest - Clear cut	49	T28N R02W S12	2606455
Timber harvest - Clear cut	52	T29N R01W S16	2606461
Timber harvest - Clear cut	12	T29N R01W S16	2606461
Timber harvest - Clear cut	36	T29N R01W S16	2606461
Timber harvest - Clear cut	23	T29N R01W S27	2606461
Timber harvest - Clear cut	28	T29N R01W S27	2606461
Timber harvest - Clear cut	96	T29N R02W S16	2605626
Timber harvest - Clear cut	54	T30N R02W S24	2606461
Timber harvest - Clear cut	33	T30N R06W S18	2606068
Timber harvest - Clear cut	31	T30N R06W S25	2606448
Timber harvest - Clear cut	61	T30N R06W S30	2606526
Timber harvest - Clear cut	24	T30N R06W S31	2606526
Timber harvest - Clear cut	1	T30N R06W S31	2606333
Timber harvest - Clear cut	118	T30N R06W S32	2606333
Timber harvest - Clear cut	35	T30N R06W S35	2606448
Timber harvest - Clear cut	39	T30N R07W S13	2606068
Timber harvest - Clear cut	56	T30N R09W S06	2606511
Timber harvest - Clear cut	21	T31N R09W S29	2606511
Timber harvest - Clear cut	26	T31N R09W S31	2606511
Timber harvest - Clear cut	3	T31N R09W S31	2606511
Forest site preparation - Ground herbicide	34	T28N R01W S33	
Forest site preparation - Ground herbicide	49	T28N R02W S12	
Forest site preparation - Ground herbicide	36	T29N R01W S16	
Forest site preparation - Ground herbicide	52	T29N R01W S16	

Straits Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest site preparation - Ground herbicide	12	T29N R01W S16	
Forest site preparation - Ground herbicide	56	T30N R09W S06	
Forest site preparation - Ground herbicide	21	T31N R09W S29	
Forest site preparation - Ground herbicide	3	T31N R09W S31	
Forest site preparation - Ground herbicide	26	T31N R09W S31	
Forest site preparation - Pile and burn	1	T30N R06W S32	2606333
Forest site preparation - Pile and burn	1	T30N R06W S32	2606333
Forest site preparation - Pile and burn	1	T31N R08W S27	2605841
Forest regeneration - Hand planting	55	T23N R03W S09	
Forest regeneration - Hand planting	76	T23N R04W S25	
Forest regeneration - Hand planting	55	T26N R01W S16	
Forest regeneration - Hand planting	8	T26N R01W S33	
Forest regeneration - Hand planting	76	T26N R01W S33	
Forest regeneration - Hand planting	1	T26N R01W S33	
Forest regeneration - Hand planting	60	T28N R01W S33	
Forest regeneration - Hand planting	24	T28N R02W S16	
Forest regeneration - Hand planting	74	T28N R02W S16	
Forest regeneration - Hand planting	47	T29N R01W S36	
Forest regeneration - Hand planting	74	T29N R02W S16	
Forest regeneration - Hand planting	30	T29N R03W S04	
Forest regeneration - Hand planting	54	T30N R02W S24	
Forest regeneration - Hand planting	9	T30N R05W S36	
Forest regeneration - Hand planting	33	T30N R06W S18	
Forest regeneration - Hand planting	39	T30N R06W S19	
Forest regeneration - Hand planting	18	T30N R07W S13	
Forest regeneration - Hand planting	18	T30N R07W S13	
Forest regeneration - Hand planting	86	T31N R08W S27	
Vegetation management - Ground herbicide	72	T27N R02W S16	
Vegetation management - Ground herbicide	11	T27N R02W S21	
Vegetation management - Ground herbicide	35	T27N R02W S22	
Vegetation management - Ground herbicide	77	T27N R02W S28	
Vegetation management - Ground herbicide	55	T28N R01W S16	
Vegetation management - Ground herbicide	24	T28N R02W S16	
Vegetation management - Ground herbicide	67	T28N R02W S35	
Vegetation management - Ground herbicide	47	T29N R01W S16	

<b>Straits Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Vegetation management - Ground herbicide	47	T29N R01W S36	
Vegetation management - Ground herbicide	30	T29N R03W S04	
Vegetation management - Ground herbicide	75	T29N R03W S04	
Vegetation management - Ground herbicide	37	T29N R04W S06	
Vegetation management - Ground herbicide	38	T30N R04W S32	
Vegetation management - Ground herbicide	24	T30N R05W S23	
Vegetation management - Ground herbicide	97	T30N R05W S36	
Vegetation management - Ground herbicide	29	T30N R05W S36	
Vegetation management - Ground herbicide	39	T30N R06W S19	
Vegetation management - Ground herbicide	38	T30N R06W S28	
Vegetation management - Hand cutting	40	T23N R04W S10	
Vegetation management - Hand cutting	33	T23N R04W S14	
Vegetation management - Hand cutting	25	T23N R04W S16	
Vegetation management - Hand cutting	66	T23N R04W S21	
Vegetation management - Hand cutting	17	T23N R04W S25	
Vegetation management - Hand cutting	13	T23N R04W S34	
Vegetation management - Hand cutting	38	T23N R04W S34	
Vegetation management - Hand cutting	5	T23N R04W S36	
Vegetation management - Hand cutting	42	T24N R03W S02	
Vegetation management - Hand cutting	13	T24N R03W S03	
Vegetation management - Hand cutting	9	T24N R03W S15	
Vegetation management - Hand cutting	50	T24N R03W S29	
Vegetation management - Hand cutting	14	T24N R03W S33	
Vegetation management - Hand cutting	90	T30N R07W S16	
<b>Yakima Planning Unit</b>			
<b>Silvicultural Activity</b>	<b>Acres</b>	<b>Location</b>	<b>FPA #</b>
Timber harvest - Late rotation thinning	288	T11N R14E S02	2702553
Timber harvest - Late rotation thinning	62	T15N R15E S34	2703118
Timber harvest - Late rotation thinning	52	T20N R19E S22	2703145
Timber harvest - Late rotation thinning	94	T21N R20E S16	2702971
Timber harvest - Late rotation thinning	136	T21N R20E S20	2702971
Timber harvest - Late rotation thinning	121	T21N R20E S20	2702971
Timber harvest - Seed tree intermediate cut	70	T20N R19E S26	2703145
Timber harvest - Seed tree intermediate cut	8	T20N R20E S16	2703147
Timber harvest - Seed tree intermediate cut	11	T20N R20E S16	2703147



Yakima Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Timber harvest - Seed tree intermediate cut	22	T20N R20E S16	2703147
Timber harvest - Seed tree intermediate cut	22	T20N R20E S16	2703147
Timber harvest - Seed tree intermediate cut	10	T21N R20E S24	2702703
Timber harvest - Seed tree intermediate cut	113	T21N R20E S24	2702703
Timber harvest - Shelterwood removal cut	73	T11N R13E S12	2703152
Timber harvest - Shelterwood removal cut	91	T11N R13E S12	2703152
Timber harvest - Shelterwood removal cut	52	T11N R13E S12	2703152
Timber harvest - Uneven-aged management	217	T12N R14E S22	2702260
Timber harvest - Uneven-aged management	18	T15N R15E S34	2703118
Timber harvest - Uneven-aged management	99	T15N R15E S34	2703118
Timber harvest - Uneven-aged management	99	T16N R16E S16	2703141
Timber harvest - Uneven-aged management	202	T16N R16E S16	2703141
Timber harvest - Uneven-aged management	66	T16N R16E S16	2703141
Timber harvest - Uneven-aged management	135	T16N R16E S20	2703141
Timber harvest - Uneven-aged management	90	T16N R16E S20	2703141
Timber harvest - Variable density thinning	17	T21N R15E S36	2730249
Timber harvest - Variable density thinning	42	T21N R15E S36	2730249
Timber harvest - Variable density thinning	123	T21N R16E S16	2730249
Forest site preparation - Ground mechanical	200	T12N R14E S22	
Forest site preparation - Ground mechanical	18	T15N R15E S34	2703118
Forest site preparation - Ground mechanical	66	T16N R16E S16	2703141
Forest site preparation - Ground mechanical	202	T16N R16E S16	2703141
Forest site preparation - Ground mechanical	99	T16N R16E S16	2703141
Forest site preparation - Ground mechanical	90	T16N R16E S20	2703141
Forest site preparation - Ground mechanical	135	T16N R16E S20	2703141
Forest site preparation - Ground mechanical	7	T20N R20E S16	2703147
Forest site preparation - Ground mechanical	17	T20N R20E S16	2703147
Forest site preparation - Ground mechanical	8	T20N R20E S16	2703147
Forest site preparation - Ground mechanical	11	T20N R20E S16	2703147
Forest site preparation - Ground mechanical	94	T21N R20E S16	2702971
Forest site preparation - Ground mechanical	92	T21N R20E S20	2702971
Forest site preparation - Ground mechanical	121	T21N R20E S20	2702971
Forest site preparation - Pile and burn	1	T21N R20E S22	2701435
Forest site preparation - Pile and burn	7	T21N R20E S22	2701435
Forest regeneration - Hand planting	244	T11N R13E S02	

Yakima Planning Unit			
Silvicultural Activity	Acres	Location	FPA #
Forest regeneration - Hand planting	109	T11N R14E S02	
Forest regeneration - Hand planting	77	T11N R14E S04	
Forest regeneration - Hand planting	88	T12N R14E S22	
Forest regeneration - Hand planting	85	T13N R14E S26	
Forest regeneration - Hand planting	18	T15N R15E S34	
Pre-commercial thinning	74	T12N R14E S02	
Pre-commercial thinning	355	T12N R14E S02	
Pre-commercial thinning	90	T12N R14E S22	
Pre-commercial thinning	91	T12N R15E S20	
Pre-commercial thinning	41	T13N R15E S16	
Pre-commercial thinning	38	T13N R15E S16	
Pre-commercial thinning	112	T15N R15E S16	
Pre-commercial thinning	45	T20N R20E S16	
Pre-commercial thinning	65	T20N R20E S20	
Pre-commercial thinning	10	T20N R20E S20	
Pre-commercial thinning	72	T21N R20E S34	
Pre-commercial thinning	50	T21N R20E S34	
Pre-commercial thinning	47	T21N R20E S34	

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