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INTRODUCTION

As directed by Oregon statute, the Oregon Department of Forestry (ODF) manages 658,000 acres of state forestlands to secure the greatest permanent value by providing healthy, productive, and sustainable forest ecosystems, that over time and across the landscape provide a full range of social, economic, and environmental benefits to the people of Oregon. The lands are actively managed in a sound environmental manner to provide sustainable timber harvest and revenues to the state, counties, and local taxing districts. This management focus is pursued within a broader management context that provides for other forest resources, including properly functioning aquatic habitats for salmonids, wildlife habitats, water quality, and recreation.

Most Board of Forestry (BOF) land was originally acquired by the counties through foreclosure of tax liens. Under county ownership, the lands provided revenue to the counties. Oregon law has maintained this revenue source by allowing ownership to be conveyed to the state “in consideration of the payment to such county of the percentage of revenue derived from such lands.”

With approved forest management plans (FMP) for all its forests, ODF has focused on implementation planning, a proposed habitat conservation plan (HCP) for Western Oregon State forestlands, and FMP and HCP revision for the Elliott State Forest.

In FY06, the Harvest and Habitat Modeling project was completed in cooperation with CFTLC, and the Tillamook Forest Center opened. Also mentioned are updates on forest health and Forest Trust Land Advisory Committee (FTLAC) meetings.

This report highlights essential management activities and issues for Board of Forestry lands during Fiscal Year (FY) 2006 (July 1, 2005 through June 30, 2006).

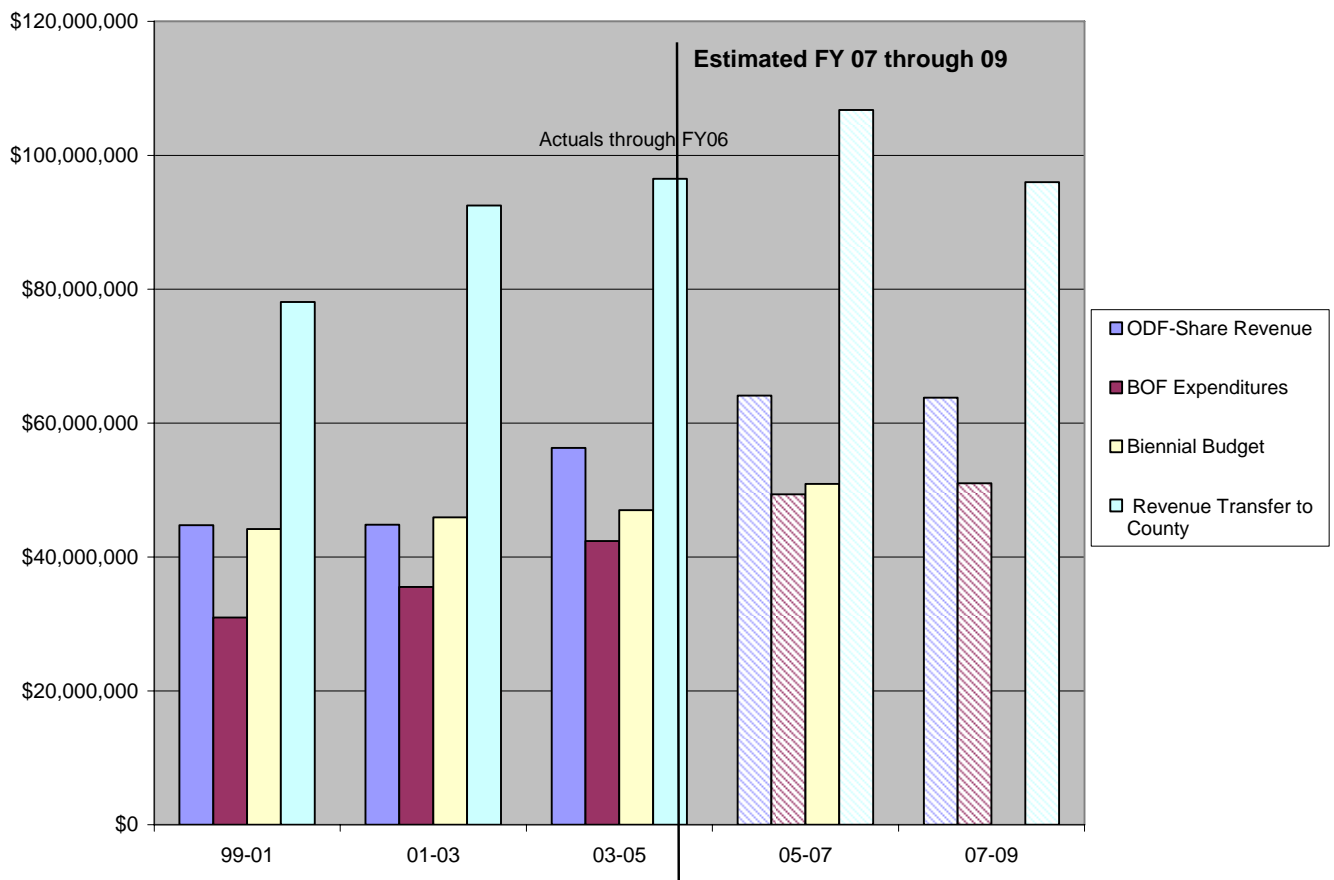
This report continues to evolve and expand from previous versions based on recommendations from the council and others. If you have any comments or questions, please contact Jim Paul, Assistant State Forester at (503) 945-7204, jtpaul@odf.state.or.us, Lisa DeBruyckere, State Forests Program Director at (503) 945-7348, ldebruyckere@odf.state.or.us or a member of the FTLAC.

FINANCIAL MANAGEMENT

This report is intended to focus on FY2006 (July 1, 2005–June 30, 2006). However, in the business of forest management, it is important to analyze trends in revenue and costs over several years, because the timing of harvest and other factors can cause any one year to be above or below average. Revenue transferred to the counties from management of BOF land has varied over the past 10 years from \$28 million to \$58 million on an annual basis. The 10-year average (FY1997–FY2006) of total revenue transfers to the counties is about \$43 million.

The ODF provides the Forest Trust Land Advisory Committee (FTLAC) with ongoing status reports related to revenue projections and proposed ODF budgets for the future biennium. The ODF manages the BOF lands from the share of the revenue that is deposited into the State Forestry Department Forest Development Fund.

Figure 1. Biennia Overview Revenue and Expenditures



BOF Expenditures numbers do not include revenue transfers discussed later in report.
 05–07 numbers for revenues and expenditures include actual from FY06 and estimates for FY07.
 07–09 numbers are estimates for both expenditures and revenue based on 3-year average prior to 2006.
 07–09 estimated budget

Timber Harvest from Board of Forestry Lands

About 276 million board feet were harvested from Board of Forestry Lands from July 1, 2005 through June 30, 2006. Table 1 displays the volume removed by County during fiscal year 2006.

Table 1: Total Volume of Timber Harvest from Board of Forestry Lands by County – FY2006	
County	Total Volume MBF (thousand board feet)
Benton	3,236
Clackamas	2,048
Clatsop	91,366
Columbia	3,415
Coos	1,708
Douglas	1,243
Klamath	4509
Lane	7,416
Lincoln	6,725
Linn	8,103
Marion	15,682
Polk	2,076
Tillamook	104,769
Washington	24,613
Total	276,908

County Revenues from Timber Sales

Table 2 shows the county share of revenues from timber harvest for the last five fiscal years. County revenues during FY2006 were about \$57 million. (Revenues are distributed to counties each quarter. Revenues distributed during each fiscal year are not exactly comparable with the value of timber removed in that fiscal year because of differences in the timing of payments from purchasers).

Before fiscal year 2003, part of the amount collected each fiscal year was actually distributed in the following fiscal year because of the timing differences between collection and distribution. Beginning in fiscal year 2003, revenue transferred to the counties occurred in the same quarter in which the revenue was generated.

Table 2: County Revenues from BOF Timber Sales by FY2002-2006					
County	2002	2003	2004	2005	2006
Benton	\$605,756	\$1,009,413	\$2,596,528	\$792,073	\$1,473,011
Clackamas	\$998,337	\$336,256	\$850,961	\$294,440	\$504,622
Clatsop	\$12,124,086	\$26,399,160	\$19,312,820	\$14,979,101	\$18,966,770
Columbia	\$1,443,747	\$1,026,224	\$741,227	\$963,567	\$680,851
Coos	\$91,680	\$184,951	\$262,816	\$109,904	\$460,526
Douglas	\$571,521	\$252,451	\$0	\$30,348	\$334,652
Josephine	\$104,676	\$76	\$0	\$0	\$0
Klamath	\$1,832,427	\$511,363	\$392,276	\$1,806,073	\$758,077
Lane	\$1,311,575	\$1,957,402	\$979,385	\$2,741,105	\$1,938,839
Lincoln	\$1,452,752	\$1,220,373	\$738,319	\$1,400,617	\$1,439,611
Linn	\$4,283,070	\$3,459,852	\$4,051,916	\$5,342,905	\$3,234,956
Marion	\$156,344	\$674,845	\$1,059,923	\$3,057,678	\$3,497,389
Polk	\$268,255	\$663,546	\$134,808	\$207,030	\$189,675
Tillamook	\$10,055,579	\$9,408,191	\$10,140,265	\$13,083,756	\$18,190,282
Washington	\$7,391,017	\$2,696,736	\$6,656,840	\$3,781,002	\$6,328,066
Total	\$42,690,822	\$49,801,650	\$47,918,084	\$48,589,600	\$57,997,327

Actual Revenues and ODF Management Costs

Actual gross revenues have increased over the past eight years from \$62 million to \$93 million in 2006. The average cost-to-revenue ratio for the past eight years is approximately 33 percent.

Table 3: Actual Gross Revenue and Expenditures—FY1999-2006

<i>Actual Revenue Dollars</i>		<i>ODF Fund 51 Expenditures</i>			<i>Revenue Transfers³</i>	<i>Total Costs</i>	
Fiscal Year	Actual Gross Revenue¹	Personal Services	Services & Supplies	Capital Outlay	Fund 51 Expenditure Total	CI/CC., COPs, Seed Orchard, Admin Prorate	Total Cost
2006	\$93,135,149	\$13,529,064	\$10,915,862	\$243,984	\$24,688,910	\$5,607,473	\$30,296,383
2005 ²	\$77,202,726	\$13,376,102	\$9,628,632	\$138,624	\$23,143,358	\$21,713,270	\$44,856,629
2004	\$75,588,318	\$11,777,213	\$7,273,545	\$199,663	\$19,250,421	\$4,210,186	\$23,460,607
2003	\$72,590,895	\$11,395,363	\$7,130,232	\$417,631	\$18,943,227	\$3,065,141	\$22,008,368
2002	\$69,114,134	\$10,686,593	\$5,695,832	\$708,570	\$17,090,994	\$3,990,047	\$21,081,041
2001	\$66,647,019	\$10,046,233	\$6,053,184	\$269,558	\$16,368,975	\$2,689,368	\$19,058,343
2000	\$74,971,314	\$9,266,535	\$5,133,552	\$171,296	\$14,571,382	\$3,589,377	\$18,160,759
1999	\$62,759,066	\$9,124,496	\$7,032,810	\$201,088	\$16,358,394	\$2,209,783	\$18,568,176

¹ Actual Gross Revenues include revenues from negotiated sales, rights-of-way, permits, etc., in addition to timber sales minus project work.

² FY05 House Bill 2148 transferred \$10 million out of the Forest Development Fund (fund 5100) into the General Fund and \$3.9 million to Oregon Parks and Recreation Department, \$991K for Public Employees Retirement System (PERS) gap, and \$4.8 million for the Tillamook Forest Center that was not reported the previous fiscal year.

³ See further details of revenue transfers on page 6.

Data taken from State Financial Management Application

FY2006 Costs

Expenditures for managing the BOF lands totaled about \$30 million in FY2006. A total of \$25 million was related directly to operational budget units that manage BOF land, which includes Salem State Forests Program staff, three regional areas and nine districts. The responsibilities of these units include overall program management, research and monitoring, long-range forest management planning, timber sale contract development and administration, and forest management activities.

Other expenditures referred to as “Revenue Transfers” included about \$5.6 million in FY2006. The transfers include administrative prorate, capital improvement projects, certificate of participations (COPs), fire protection costs, and seed orchard management.

ODF's goal is to ensure the administrative prorate accurately reflects the work performed by administrative staff, and that each end-user pays their fair share of administrative costs. The administrative prorate provides the following services:

- Financial Services (accounting and reporting services)
- Information Technology support and infrastructure to ODF staff and field offices
- Oversight of Facilities and Procurement activities (contracting and physical assets)
- Payroll calculation and Property Management oversight
- Biennial Budget development and implementation
- Executive Level Policy and Administrative oversight (State Land Board, Board of Forestry, Executive Team and Administrative Services Program Directors)

The administrative prorate charges for FY2006 were \$2.4 million. Prorate percentages are calculated (the percentage of time a specific service area performs work for the benefit of an end-user) from work studies performed each biennium by ODF. Each biennium, a new work study is conducted to ensure the allocated percentages are as accurate as possible, then a policy option package is presented as part of the budget to re-align ODF's budget within the study parameters.

Seed orchard costs for FY2006 were \$160,000. These funds were used to produce genetically improved seed (superior growth characteristics as identified through traditional breeding and selection methods) appropriate for state forestlands.

The COP interest and principle allocation funded debt service for capital construction on the Salem headquarters buildings totaled \$294,000 in FY2006. Capital improvement project costs of \$1.9 million were a result of facility development and improvement to the Salem compound and the Tillamook Forest Center.

The Oregon Department of Forestry Protection from Fire costs were \$857,000 for FY2006. The remaining \$74,000 of the revenue transfers included charges for residual equity (i.e. additional vehicle or vehicle upgrades) and an intra agency payment. The revenue transfers out were offset by some grants associated with recreation.

Historical Timber Harvest Information

Table 4 shows the gross value of timber sales and forest products before project costs are subtracted. Timber harvested volume is volume removed during the FY2006 period. The average timber stumpage price is for all species harvested during FY2006.

Table 4: Historical Timber Harvest Value, Volume, Stumpage Prices—FY1997–2006			
Fiscal Year	*Timber Sales & Forest Products Value	Timber Harvest Volume (MBF)	Average Timber Removed Stumpage Price
2006	\$103,150,843	276,908	\$372
2005	\$89,542,266	281,655	\$311
2004	\$81,104,304	239,386	\$339
2003	\$86,875,185	253,532	\$343
2002	\$79,544,382	228,326	\$348
2001	\$65,489,876	193,069	\$339
2000	\$74,639,111	214,165	\$349
1999	\$62,735,261	169,896	\$369
1998	\$45,544,510	106,350	\$428
1997	\$66,773,061	139,225	\$480
Last 5-Year Average	\$88,043,396	255,962	\$343
10-Year Average	\$75,539,880	210,251	\$368

*Includes county and ODF shares, project work, and forest rehabilitation payments.

Forest Rehabilitation Repayment Status

The Forest Rehabilitation Fund was created by the 1949 Oregon Legislature “to rehabilitate, reforest and develop state-owned forest lands so as to secure the highest permanent usefulness to the whole people of the State of Oregon.” Subsequently, the State Treasury paid these bonds, and the fund is being repaid from timber harvest revenues. Tillamook and Clatsop County bonds were paid in completion during FY2006. The current repayment status is shown by county in Table 5.

Table 5: Balances for Rehabilitation Payback per County as of June 30, 2006

County	Obligation	Sum of Payments	Balance
Columbia	\$4,751	\$1,071	\$3,681
Josephine	\$29,903	\$0	\$29,903
Washington	\$921,285	\$866,732	\$54,554
Total	\$955,939	\$867,003	\$88,138

County Revenue Projections

Currently, the ODF provides the Association of Oregon Counties a revenue projection twice a year. These projections are estimates and include sales already sold that have outstanding receivable revenues; they do not include future sold sales that may have some revenue in the period projected. Assumptions are made on the timing of receivable revenues based on each sales contract length. Revenues will depend on actual versus assumed timing of revenue and actual versus estimated recovery volumes. Market factors or changes in federal or state regulatory requirements could significantly alter projections. Districts often provide a more specific projection based on a more detailed estimate of when the volume may be removed.

State Forests Revenue Projection Performance Audit

The State Forests Program began creating a revenue projection process in 1984 as a tool to determine whether the forest development fund was going to remain solvent during the recession of the early 1980s. The purpose of the original revenue forecast was strictly for internal information—to determine whether the revenues collected from sales could adequately fund program activities.

In June 2006 the program entered into a contract with Moss Adams, LLP to conduct a performance audit of the existing methodology used to create the revenue projection and to assess revenue components. The project consists of two phases: Phase one will concentrate on understanding and documenting the current methodology used to produce the revenue projection. Phase two of the work plan will include testing and

making an assessment of the data components, and a series of options to improve revenue projection methodology.

Moss Adams, LLP and State Forests Program staff conducted a meeting with a representative from the Council of Forest Trust Lands Advisory Committee during October to provide a progress report on the revenue projection project and answer any questions or concerns. Final results of the performance audit should be available in January 2007. The ODF will share the results with our beneficiaries and work collaboratively to implement improvements to the revenue projection process.

Long-Term Market Trends

The projection of the long-term trend is from the State Revenue Forecast which is based on projections from Global Insight Inc.

Over the next four years, log and sawtimber stumpage prices are likely to remain relatively stable. Mortgage interest rates are projected to increase by up to 11% from 2006 levels, resulting in declining national housing starts over the next several years. However, strong demographics and a growing economy are forecasted to keep housing starts from declining more than about 9% from current levels. This will help uphold western lumber production, but plywood production will struggle to remain at current levels because of expanding oriented strand board capacity outside the West.

Sawlog prices may not increase because of competition to Oregon's wood products from oriented strand board and engineered wood products, the potential increased raw log imports from Canada, wood product imports from the southern hemisphere, and declining panel and lumber prices, currently down 25 percent from 2005.

Downward price movement will be limited because housing starts are forecasted to drop only to historical trend levels from the increased levels of recent years, and because of a lack of federal timber availability and limited timber inventories on private land.

Export demand will remain weak with ever-increasing overseas competition. With relatively strong lumber production, supplies of mill residuals will be plentiful, further limiting the price of chips and roundwood.

Forest Management & Planning

NW AND SW OREGON STATE FORESTS

About 26,000 acres of Common School Forest Lands are managed under the Northwest Oregon and Southwest Oregon State Forest Management plans. This represents about 3% of the total state forest land managed under these plans.

Forest Management Planning

District Implementation Planning

The State Forester approved implementation plans (IP) for the districts included in the Northwest Oregon and Southwest Oregon State Forests Management Plans (Astoria, Forest Grove, Tillamook, North Cascade, West Oregon, Western Lane, and Southwest Oregon Districts) in March of 2003. Each IP describes the management approaches and activities for the 10-year period from July 1, 2001 through June 30, 2011.

The Harvest and Habitat (H&H) Modeling Project was completed in February 2006. The project developed spatial forest models to inform adaptive management discussions related to the NW and SW Forest Management Plans, and to assist ODF decision-makers in establishing short-term harvest levels and possible subsequent modifications to IPs. The BOF and ODF decision-makers requested additional model runs to refine the information needed for such decisions.

Western Oregon Habitat Conservation Plan

Planning efforts on the Western Oregon Habitat Conservation Plan (HCP) have focused this past year on participating in the modeling efforts related to the H&H Modeling Project. Project results were published in March 2006. Both preliminary and final outputs have been used throughout the year to assist the ODF, FTLAC, BOF and the general public to better understand the economic and environmental strengths and weaknesses of the modeled management alternatives.

The two alternatives included in these discussions are based on the NW and SW FMP, and model the implementation of two federal Endangered Species Act (ESA) compliance options: 1) program-established take avoidance standards; and 2) draft HCP standards. The model outputs suggest modest differences in the economic outputs between these two alternatives. These modeling results, and additional input from stakeholders, have lead the Board of Forestry to request supplementary information for focusing their discussions, such as information related to federal ESA and various options available.

In June 2006, the State Forester directed the program to explore two aspects of the FMP species-of-concern strategy. The first aspect was to “explore alternative strategies for ‘species of concern’ that produce a favorable biological result on the ground.” Currently, the FMP species-of-concern strategy discusses negotiating a HCP, but does not describe the specifics of this strategy were it to be

programmatically implemented. A recommended, program-developed species-of-concern strategy that might be selected could be used for possible modification of the FMP should the decision be made not to pursue a HCP. The second aspect of the State Forester's direction was to review the current draft HCP strategies. This review would consider current operational and biological information, including knowledge of owl locations on state forestlands in the Northwest, and modeling outputs.

A workgroup of Salem and district biologists, and Salem and district staff was formed to develop strategy recommendations. The work group will also be seeking input from Oregon Department of Fish and Wildlife and stakeholders during this process that will extend until the end of 2007. Meetings with the federal services regarding the HCP have been scheduled to resume in September 2006.

Public Involvement

The State Forests Program proactively involved the public in the successful implementation of its forest management and recreation plans. This was achieved through a standing advisory committee comprised of diverse interests, referred to as the State Forests Advisory Committee (SFAC). The program also conducted a public comment period for its proposed annual operations plans (AOPs) scheduled for the coming fiscal year that begins in July, 2006. There were also advisory committees that advised district staff on important recreation issues and activities.

The 2007 AOP public comment period provided an opportunity for the public to review the AOPs, ask questions and offer comments. An annual operations plan includes a summary report and details related to proposed on-the-ground operations, such as timber sales, road building, reforestation, stream enhancement projects and trail building. The program sought public input for the purpose of receiving feedback that helped to: clarify the AOPs; improve consistency with the long range FMPs and IPs; and identify any new information that could affect a planned operation or improve its efficiency or effectiveness.

The plans for each of the nine districts with ODF-managed state lands, along with maps showing locations of planned activities, were posted on the ODF website. The AOPs underwent a 45-day comment period (February 15 through March 31). Districts responded to each of the summary comments, which were then posted on the ODF website.

The SFAC met nearly every other month to engage in ongoing discussions regarding operational activities or issues, including the following:

- Annual operations plan reviews;
- Multi-stakeholder dialogues processes for topics that went beyond the operational level, such as adaptive management and Swiss Needle Cast research results;
- Clatsop State Forest field trip focused on a range of harvest activity, reforestation, hardwood stands and recreation development; and
- Harvest & Habitat Model Project updates.

Annual Operations Plan and Budget – Summary FY2007

Annual Operations Plans (AOPs) link operational planning and accountability to ODF plans, policies, goals and budgets, by District. AOPs address the following issues requiring significant commitment of personnel or funds:

- timber sales;
- habitat management;
- young stand management;
- recreation projects;
- road construction and maintenance; and
- monitoring efforts and other activities.

The AOPs provide information for fiscal budget development and revenue projections. AOPs may need to be adjusted throughout the process, based on revenue projections.

Annually, drafts of AOP components undergo significant review by ODF staff and supporting advisory committees, as well as a public review opportunity. Once the review period has ended, district foresters consider input received from all these sources before approval of the AOPs. District Foresters will also approve modifications of AOPs when necessary because of new information, changes in budget levels, or unforeseen circumstances.

See Tables 6 and 7 for a summary of the 2007 AOPs by county and by district. See Table 8 for the summary of the FY2007 budget by unit.

**Table 6: FY2007 – BOF Lands Annual Statewide Operations Plan
Summary Sale Plan by County**

County	Clear-Cut Acres	Partial Cut Acres	Total Acres	Total Volume (MMBF)	Gross Value (MM\$)	Project Value (MM\$)	Net Value (MM\$)
Benton	62	79	141	2.9	0.9	0.2	0.7
Clackamas	115	0	115	3.0	0.6	0.1	0.5
Clatsop	1,045	2,257	3,302	68.7	22.3	1.8	20.5
Columbia	0	0	0	0	0	0	0
Coos	144	0	144	5.5	2.4	0.1	2.3
Douglas	0	0	0	0	0	0	0
Josephine	0	233	233	1.1	0.3	0.1	0.2
Klamath	0	943	943	5.2	1.5	0.1	1.4
Lane	200	190	390	8.7	3.2	0.8	2.4
Lincoln	30	623	653	5.5	1.4	0.4	1.0
Linn	0	504	504	5.6	1.9	0.2	1.7
Marion	140	211	351	5.0	1.7	0.1	1.6
Polk	0	0	0	0	0	0	0
Tillamook	2,445	3,600	6,045	77.6	17.8	3.6	14.2
Washington	161	1,418	1,579	25.4	9.7	1.0	8.7
Grand Total	4,342	10,058	14,400	214.2	63.7	8.5	55.2

**Table 7: FY2007 – BOF Lands Annual Statewide Operations Plan
Summary Sale Plan by District**

District	Clear-Cut Acres	Partial Cut Acres	Total Acres	Total Volume (MMBF)	Gross Value (MM\$)	Project Value (MM\$)	Net Value (MM\$)
Astoria	910	2,074	2,984	59.5	19.0	1.6	17.4
Coos	144	0	144	5.5	2.4	0.1	2.3
Forest Grove	539	2,374	2,913	53.3	20.4	1.7	18.7
Klamath-Lake	0	943	943	5.2	1.5	0.1	1.4
N Cascade	255	715	970	13.6	4.2	0.4	3.8
Southwest	0	233	233	1.1	0.3	0.1	0.2
Tillamook	2,202	2,827	5,029	58.9	10.4	3.1	7.3
West Oregon	92	702	794	8.4	2.3	0.6	1.7
Western Lane	200	190	390	8.7	3.2	0.8	2.4
Grand Total	4,342	10,058	14,400	214.2	63.7	8.5	55.2

Table 8: State Forests Fiscal 2007 Budget – BOF Lands

Budget Unit	PS	S&S	CO	TOTAL	CI/CC
ADMIN UNIT	\$ 482,658	\$ 374,124	\$ -	\$ 856,782	\$ -
ASSET MGMT	\$ 582,423	\$ 424,494	\$ -	\$ 1,006,917	\$ -
ADAPTIVE MGMT	\$ 569,644	\$ 1,742,808	\$ -	\$ 2,312,452	\$ -
POLICY/PLAN	\$ 339,252	\$ 139,849	\$ -	\$ 479,101	\$ -
RESOURCE MGMT	\$ 626,099	\$ 1,608,416	\$ -	\$ 2,234,515	\$ -
SALEM TOTAL	\$ 2,600,076	\$ 4,289,691	\$ -	\$ 6,889,767	\$ -
NWOA OFFICE	\$ 635,432	\$ 562,719	\$ 2,060	\$ 1,200,211	\$ 57
TFC	\$ 560,118	\$ 512,750	\$ 45,000	\$ 1,117,868	\$ -
ASTORIA	\$ 2,219,979	\$ 1,687,145	\$ -	\$ 3,907,124	\$ 99,097
CASCADE	\$ 921,180	\$ 772,809	\$ 29,029	\$ 1,723,018	\$ -
FOREST GROVE	\$ 1,757,320	\$ 1,569,231	\$ 5,299	\$ 3,331,850	\$ 325,000
SOUTH FORK	\$ 1,296,979	\$ 671,108	\$ 115,000	\$ 2,083,087	\$ -
TILLAMOOK	\$ 2,915,763	\$ 2,204,324	\$ 90,000	\$ 5,210,087	\$ 235,000
WEST OREGON	\$ 736,990	\$ 392,076	\$ 4,723	\$ 1,133,789	\$ 106,272
SEED ORCHARD	\$ -	\$ -	\$ -	\$ -	\$ 687,000
NW Area Total	\$ 11,043,761	\$ 8,372,162	\$ 291,111	\$ 19,707,034	\$ 1,452,426
SOA OFFICE	\$ 21,129	\$ 5,734	\$ -	\$ 26,863	\$ -
COOS	\$ 145,049	\$ 132,254	\$ 785	\$ 278,088	\$ 14,784
SWO	\$ 181,634	\$ 100,789	\$ -	\$ 282,423	\$ -
WEST LANE	\$ 303,937	\$ 151,429	\$ -	\$ 455,366	\$ -
SOA Total	\$ 651,749	\$ 390,206	\$ 785	\$ 1,042,740	\$ 14,784
EOA OFFICE	\$ 14,198	\$ 38,048	\$ -	\$ 52,246	\$ -
KLAMATH	\$ 425,209	\$ 397,639	\$ -	\$ 822,848	\$ -
EOA Total	\$ 439,407	\$ 435,687	\$ -	\$ 875,094	\$ -
TOTAL FY07	\$ 14,734,993	\$ 13,487,746	\$ 291,896	\$ 28,514,635	\$ 1,467,210

Personal Services (PS) includes employee salary and benefits; Service & Supply (S&S) includes professional and service contracts, vehicles, training, etc.; Capital Outlay (CO), Capital Improvement/Capital Construction (CI/CC) includes investments in new vehicles, building improvements, and new buildings.

Key Projects

Harvest & Habitat Model Project

The Harvest & Habitat (H&H) Model Project began in April 2003, shortly after approval of district Implementation Plans (IPs). A condition of approving the IPs was a work plan that included the creation of a new timber harvest and habitat model based on the goals and strategies in the Forest Management Plans (FMPs). Information from the models is intended to be used to: 1) determine if changes should be made to the FMPs; 2) decide whether to pursue a Habitat Conservation Plan (HCP); and, 3) assist in setting harvest levels for annual operation plans.

Models for four alternatives were created. Two alternatives were modeled for each of seven districts: Astoria, Tillamook, Forest Grove, North Cascade, West Oregon, Western Lane, and Southwest Oregon. Both simulated the FMP: One used HCP strategies, the other used take avoidance strategies for threatened and endangered species. Two other alternatives that fell outside the goals and objectives of the FMP were also modeled for three north coast districts: Astoria, Tillamook, and Forest Grove. The wood emphasis alternative simulated short rotations and intensive harvesting with Forest Practices Act levels of protection for stream buffers and ODF's take avoidance for threatened and endangered (T&E) species. The reserve-based alternative identified approximately 60% of the landscape that had no harvesting or restricted harvesting in areas that included stream buffers and habitat for T&E species.

The H&H final report was presented to the Board of Forestry in March, 2006. Significant findings on the take avoidance (FMP~TA) and HCP (FMP~HCP) alternatives for all seven districts include:

- Across all seven districts, FMP~TA produces more harvest volume (15%) in the first decade, and remained higher for the first 30 years, because fewer acres are impacted from northern spotted owls and marbled murrelets. FMP~TA produces less volume (14%) over 150 years because of the additional owl and murrelet habitat found over time.
- The effect on harvest volume of FMP~HCP versus FMP~TA is not the same on all districts. The southern districts have a reduction in harvest volume of 3 mmbf/yr in the first decade using take avoidance strategies, and the three north coast districts had an increase of 36 mmbf/yr.
- Both FMP~HCP and FMP~TA achieve 50% complex structure, but FMP~TA will overachieve 50% in the long-term because 40% of each new owl circle has no harvesting and will develop into complex structure.
- FMP~HCP develops complex structure at an accelerated rate because of more acres being actively managed.
- Cash flow has a similar relationship between FMP~HCP and FMP~TA as harvest volume. However, cash flow is negatively affected during the first 5 decades due to road construction costs, especially in Tillamook.
- NPV for FMP~TA is higher (12% higher) than FMP~HCP because of the higher cash flow in the first 25 years.

- When comparing FMP~HCP and FMP~TA for all seven districts, habitat levels appear to be similar for 90% of the species analyzed.
- Model results show an apparent difference in the amount of older forest structure-based habitat for some species. These differences may be overestimated, because of the challenge of predicting the future distribution of structural components (i.e., snags) across the landscape—in all stand types—and the uncertainty of complex structure development for the FMP~TA model.

Significant findings on the wood emphasis and reserve-based alternatives for the three north coast districts include:

- The wood emphasis alternative produces more than twice the amount of volume than FMP~HCP in the first decade and 50% more volume in 150 years because of the goal for 50-year harvest rotation, no goal for complex structure, and fewer acres in owl protection and riparian buffers. It develops about 10% complex structure compared with 50% for FMP~HCP.
- The reserve-based alternative produces about 40% less harvest volume than FMP~HCP because of the acres dedicated to reserves. In 150 years reserve-based develops 60% complex structure compared with 50% in FMP~HCP.

Other significant findings:

- Confidence in implementing short-term (10-year) harvest volume for the FMP~HCP alternative (using a 50% complex structure goal) on the ground is high.
- Long-term harvest volumes [using FMP~HCP; 50% complex structure goal] seem to be sustainable.
- There is a trade-off between the achievement of harvest volume and the attainment of complex stand structure: higher targets for complex structure yield lower harvest volumes, and conversely, lower targets for complex structure can yield higher harvest volumes.
- A Volume Flow Analysis conducted for the three north coast districts indicates that harvest volumes in the first decade could be increased somewhat without falling below baseline [sustainable] levels; however, districts have not verified if this approach can be implemented on the ground.
- 10-year Salmon Anchor Habitat (SAH) strategies for the three north coast districts result in less than a 0.5% decrease in harvest volume in the first decade, and less than a 0.1% decrease over 150 years.

In their 2005 issues scan, the BOF requested a scientific review of the H&H Model Project. The objectives of the review were to: 1) Assess the strengths and weaknesses of the models, including the level of confidence in model results; 2) Determine what kinds of decisions can, and cannot, be made credibly using the models; 3) Help ODF determine the most appropriate application of the models in the decision-making process; and 4) Improve future modeling efforts.

The review was conducted in July, 2006, by ESSA Technologies, Vancouver, B.C. Dave Marmorek and Carol Murray of ESSA moderated the panel. Members of the review panel were: Dr. Terry Droessler, Forest Analytics, Monmouth, OR; Dr. Bob Monserud, USFS, Portland, OR; Dr. Ross Kiester, Biodiversity Futures, Corvallis, OR; Mr. Glen Dunsworth, Ecological Consulting, Lantzville, B.C.; Mr. Steven Northway, Univ. B.C.

Findings of the review include:

Strengths

- Many of the model components (spatial reality, roading and stand level treatments) are cutting-edge.
- Optimization model
- Credible output for harvest
- Strong inventory (will be getting better)

Weaknesses

- Strata-based inventory data are insufficient (will be getting better)
- Accuracy and precision require a measure of variation, which is lacking
- Lack of confidence limits on output
- Less credible output for habitat (structure classes vs. habitat attributes)

Credibility

The review panel concluded the H&H model was credible and able to address decision issues for which it was intended (the 'harvest output' more so than the 'habitat output'). Outputs from this type of model can be used to assist in making management decisions, to guide policy and provide strategic direction, as a feedback tool in adaptively refining the management plan, and to display uncertainty to managers (after variation has been incorporated).

- Appropriate discussions about the outputs should include a greater examination of variability and uncertainty, and improving documentation and communication. The review generally concluded that the model in its current form should *not* be used for focusing on only one projection (as in H&H Final Report), or for guiding specific actions on harvest blocks.

Adequacy of Input Data

The review panel had mixed conclusions regarding whether the accuracy and precision of underlying data in the model was sufficient for the intended purpose, and for the scale it needs to be applied. It was deemed generally adequate if the use is consistent with limitations in the quality of the data. The model was also deemed adequate to address the question of whether intended stand treatments and harvest schedules will address the problem of stand and landscape simplification.

Also, the Harvest Unit Boundary mapping and the Road Network appear to be well executed. However, the strata-based inventory data are considered currently insufficient. Also, the model is likely insufficient to assess coarse filter species needs and spotted owl impacts. The linkage between stand structure and habitat was also judged to be weak, and the model is lacking a measure of variation (important part of assessing accuracy and precision).

Underlying Assumptions

The review panel had mixed conclusions in regards to whether the underlying assumptions are valid for each of the major model components (i.e. wood harvest, revenue and costs, growth and yield, biodiversity). It was noted that the 'Sessions optimization' is superb and state-of-the-art, and that the assumptions for harvest seem more valid than assumptions for biodiversity.

However, the assumption that a strata-based inventory represents the inherent variability of stands was viewed as invalid. Estimation of known habitat requirements for northern spotted owl, marbled murrelet and coarse filter species through structural classes is also not well supported with empirical data. The unit of success seems limited to achieving adequate complex structure, rather than monitoring actual wildlife response.

Improvements

The panel made numerous suggestions for improvements in the H&H model itself, as well as in the processes for model development. Improvements were suggested for input data, model rules, output/runs, project management, and field monitoring. The State Forests Program will be responding to these suggestions to improve the model over the next several months. Program staff is also continuing to evaluate some additional questions raised by the BPF.

Watershed Assessment and Analysis

Watershed analysis is an important component of the implementation of the FMPs. Watershed analysis projects collect the needed information at both watershed and site-specific levels and analyze collected information.

In general, watershed analysis projects provide a greater understanding of current conditions and interrelated processes in watersheds. This information is used through an adaptive management process to improve existing and future plans, and accomplish FMP objectives.

During FY2006, two projects were completed—the Miami River project was completed in August 2005, and the Upper Nehalem project was completed in December 2005. To date, four watershed projects have been completed according to the targeted watershed analysis schedule: the Trask River; the Elliott State Forest; and the above mentioned projects.

The State Forests Program is currently working on one project, the Wilson River watershed analysis. Several data collection activities are being performed in association with this project. These include surveys of fish presence, aquatic habitat, recreation trail condition, and the condition of dispersed campsites. Additionally, this analysis will include results from a slope stability project encompassing most State Forest land. The results of these projects will be used to identify locations where special management activities or restoration projects will be most beneficial to aquatic resources.

Staff have created action plans from the contractor's findings for both the Upper Nehalem and Miami River projects. Once completed, project-related documents are placed on the ODF website:

http://oregon.gov/ODF/STATE_FORESTS/watershed.html

Currently, the website contains the ODF Watershed Manual and the Trask River, Elliott State Forests, Upper Nehalem and Miami River watershed documents.

Second-Party Assessment of Forest Management Plans

The Oregon Department of Forestry (ODF) manages about 634,000 acres of state forestland in Northwest (NW) and Southwest (SW) Oregon under two forest management plans (FMPs) finalized in 2001. To evaluate the effectiveness of these plans and ODF's implementation of them, ODF commissioned Strategic Resource Systems (SRS) in 2006 to assess:

- the clarity of the plans' goals addressing a range of environmental, social, and economic issues;
- the adequacy of the plans' strategies and ODF's procedures for achieving the plan's goals;
- ODF's implementation of these strategies and procedures; and
- whether any plan or implementation changes are warranted.

The assessment addressed the operations and lands covered by ODF's 2001 NW and SW Oregon FMPs. To support the BOF in their ongoing oversight function of these plans and ODF in its continuing review and revision of its management and monitoring practices, the assessment was designed to:

- provide an independent, objective review;
- help ODF find solutions to any problems identified in the review;
- provide a baseline for future re-assessments or forest management certifications; and
- help ODF develop its own implementation and performance monitoring systems based on its own existing initiatives.

To focus on a tractable set of criteria, the 2006 assessment team used the Resource Management Goals (RMGs) in the respective FMPs. These goals are of a scope and number comparable to the audit criteria embodied in forest certification standards, but are tailored specifically to the mission and conditions of ODF State Forests.

To provide an understanding of ODF's forest management processes for achieving these goals, other provisions of the FMPs (notably, their strategies) and other ODF plans and procedures were evaluated by the assessment team prior to their visit to Oregon to conduct the field assessment.

The assessment team completed the field assessment in NW Oregon districts by orally reviewing its findings. This review provided staff with an early indication of the results of the assessment and resulted in further feedback on the assessment findings. The assessment report was presented to the Board of Forestry on April 27, 2006.

The report is posted on the ODF Web site at:

http://oregon.gov/ODF/STATE_FORESTS/docs/Second_Party_Assessment_3-06_FINAL_REPORT.pdf

Among the findings, the study found that by using structure-based management, ODF is moving the primarily "middle-aged" forests toward a mixture of habitats, including complex forest stands which are similar to old growth.

In the area of recreation, according to the study, some off-highway vehicle use near streams is causing erosion and sedimentation problems. It suggested that ODF seek “more cooperation with recreational users to construct and maintain facilities and control problematic users.”

The study noted the access system to the forests is good and being improved, but a few roads still need major upgrades. Some roads and stream crossings are introducing sediment to streams, and the study warned that wet-weather log hauling can harm even good roads.

The study noted that by following its FMPs, ODF is doing a good job of protecting and diversifying fish and wildlife habitats. The habitat needs of northern spotted owls and marbled murrelets—two threatened species under the federal and state endangered species acts—are being addressed through surveys, habitat management and protection, and by restricting activities.

The study noted that harvest levels appear to be sustainable, but offered some suggestions for improving timber production.

Wildlife browsing on regeneration stands (replanted after clearcuts) should be more formally monitored, the report said, and more complete slash burning could reduce habitats for rodents at high population levels. It also suggested lower-density plantings that could reduce the need for precommercial (a non-timber sale activity) thinnings.

The study said better stand-level record-keeping would help to determine the effectiveness of past treatments, such as thinnings. It said additional marketing opportunities might exist for both smaller and large diameter wood.

“Stable and sustainable timber harvest levels and other management programs appear to be providing a mix of values and outputs desired by the citizens of the state,” the report stated. It also noted that in addition to seeking objective information through a public opinion survey, ODF could provide more opportunities for regular, direct and local interaction with the public.

First Biennial Survey of Public Knowledge and Opinions toward Management of Oregon State Forests

A recent public opinion survey focusing on state-managed forestlands found Oregonians concerned about how forest management affects the environment, the timber industry and recreation. The survey, scheduled for every two years for the next 10 years, established baseline data and information.

The statewide survey of 1,000 Oregonians was conducted in March and April. The survey found a majority of Oregonians (57 percent) say they are concerned about forest management. But it trailed other top concerns—public education (75 percent), health care (71 percent), the environment (65 percent), and the economy (60 percent).

Seven out of 10 Oregonians said they believed the Oregon Department of Forestry (ODF) does a good job managing state forests. Nearly half (47 percent) said ODF is a world leader in wise forest management.

In terms of important benefits coming from state-managed forests, the survey found clean water (87 percent) on top, followed by wildlife habitat (82 percent), fish habitat (78 percent), hiking and wildlife viewing (71 percent), recreation areas (65 percent), timber (63 percent) and campgrounds (62 percent).

Nine out of 10 Oregonians accept and understand the need for thinning. They saw thinning as moderating the risk of severe wildfires and improving forest health.

Although about two-thirds said a healthy forest should have some snags and decaying logs, a third said a healthy forest should not have those characteristics.

Clearcutting is a divisive issue; with 51 percent saying it should never be allowed on state-managed forests, and 42 percent believing it should be allowed.

The survey noted that Oregonians have a high regard for ODF, viewing the agency as credible and trustworthy—as a world leader in wise and sustainable forest management.

They also often confuse ODF with the Forest Service, and they would like to be better informed about state forests. They say they want “balanced” forest management.

The final report of the survey was presented at the BOF workshop, April 27, 2006.

Stand Level Inventory

The Stand Level Inventory (SLI) is a forest inventory developed by ODF, and provides site-specific information on trees, downed wood and non-tree vegetation (herbs-shrubs-grasses) on state forestlands. It is a primary source of information for operational intensive management planning and decision making, harvest scheduling, monitoring, watershed assessment, wildlife habitat suitability assessment, and stand structure classification.

Forest-wide SLI information is derived using a double-sampling based approach. Just as a sample of trees in a stand is expanded to represent estimates of all trees in the stand, a sample of stands may be measured and expanded to represent estimates of all stands in the forest. The long-term SLI goal is to measure and maintain at least 50% of all stands (County Forest Trust Lands [CFTL] and Common School Forest Lands [CSFL] combined) with recent inventory sampling. Stands to measure are chosen to meet anticipated needs for information for pending operations, and to maintain a proportional balance of measurements across the range of stand types identified in the inventory.

Stands are differentiated on the basis of timber species, timber size, and stand tree density. Where CFTL and CSFL lands are adjacent, individual stands may include both classes of ownership. To report accomplishments and inventory status by ownership class, each SLI stand is categorized by using the ownership class having the majority of acres. Table 9 below shows the SLI status as of June 2006 for all stands, and Table 10 shows the summary for the CFTL ownership class only.

Table 9: SLI Status of All Ownership Classes as of June 2006

State Forests Districts	Total Stands	Stands with Recent Samples	Percent of Stands with Recent Samples
Astoria	1,461	708	48%
Forest Grove	1,242	708	57%
Tillamook	1,850	619	33%
West Oregon	949	450	47%
North Cascade	767	367	48%
Western Lane	358	183	51%
Southwest	289	162	56%
Coos	2,138	1,237	58%
Klamath-Lake	302	258	85%
Total	9,356	4,692	50%

Table 10: SLI Status of the CFTL Ownership Class as of June 2006

State Forests Districts	CFTL Stands	CFTL Stands with Recent Samples	Percent of CFTL Stands with Recent Samples
Astoria	1,438	702	49%
Forest Grove	1,232	705	57%
Tillamook	1,762	597	34%
West Oregon	747	358	48%
North Cascade	747	355	48%
Western Lane	333	168	50%
Southwest	161	74	46%
Coos	200	114	57%
Klamath-Lake	219	182	83%
Total	6,839	3,255	48%

ODF conducts annual stand sampling projects in order to meet the measured stand goal. SLI cruises were completed for 827 stands (8.8% of all stands) during the latest annual project from July 2005 through June 2006. A total of 618 of these newly measured stands (9.0% of the CFTL stands) are in the CFTL ownership class.

During FY2006, Tillamook District completed a stand boundary re-delineation project. The district undertook the project because prior stand delineation featured too much within-stand variation in tree characteristics. Though the mean estimates were useful for reporting on broad scales, the variation caused the information to be less useful for operational site-specific planning and decision making. No new SLI sampling was conducted for the July 2005 through June 2006 period because the stand boundary work had to be finished before any new inventory cruising work was done. The stand boundary project has been completed and sampling is slated to resume in the next annual SLI sampling project.

The number of SLI stands in Tillamook has increased from 1,850 to 5,759 as a result of the boundary re-delineation (5,166 of the stands are suitable for SLI sampling methods). Much of the previous sample work is applicable to the new stand configuration, but a rebalancing of samples within many stands is necessary. Addition of more samples during future projects is a priority. Preliminary estimates indicate that by December 2007, about 22% of the newly delineated stands that are suitable for SLI sampling will have measured samples. The number of measured sample stands will have increased from the current 619 to an estimated 1,120.

Recommendations following completion of the Harvest & Habitat (H&H) model project of 2006 included adoption of improved SLI measured to non-measured stand sample assignment methods; a transition from the current strata-based assignment approach to what's known as "nearest-neighbor" assignment, or "imputation" for short. Imputation offers the advantage of reducing estimation errors for non-measured stands by eliminating the effects of within-strata variation. Work by ODF to incorporate imputation into SLI is in progress. Along with the adoption of imputation, ODF will continue to evaluate requirements and expectations for uses of SLI information, particularly the efficacy of the double-sampling approach and associated goals for the percentage of measured stand sampling.

Other Management Activities / Outputs

Intensive Management Summary

Intensive management activities (Table 11) represent an investment to increase the volume and/or quality of timber. These investments result in increased harvest revenue and improved habitat for many late seral habitat-dependent fish and wildlife species—species requiring older forest habitat.

Reforestation activities include site preparation, planting, and tree protection. These activities are dependent on the timber harvest schedule, the availability of suitable seedlings and weather. The timing of when a harvest unit will be completed and available for site preparation or planting is sometimes unpredictable and made over a year in advance. This often results in a situation where the harvest unit is not ready and the scheduled activities are postponed. Conversely, there are situations when harvest units are finished earlier than predicted resulting in opportunities to move scheduled reforestation activities forward. Capturing these opportunities is contingent on having flexible reforestation contracts, being able to prepare the site, and availability of appropriate seedlings.

The quality of seedlings available from the nurseries is also variable. Because of a number of situations, there may be a shortfall or excess of seedlings available from the nurseries. Shortfalls result in not being able to plant ground on schedule, while an excess may allow the planting of an available area a year ahead of schedule. Weather conditions are a major factor in chemical site preparation and tree planting. The window of opportunity is sometimes so short for certain activities that conditions may not be suitable to accomplish all the work planned. This is especially true in chemical applications where weather parameters and physiological development of the vegetation are critical. Because of these variables, what is accomplished is often different than what was planned.

Release, precommercial thinning, fertilization, and pruning are activities that enhance the growth or quality of crop trees. These activities are not generally as time dependent, and can provide flexibility to the program. Because of circumstances such as high fertilizer costs, a project may be cancelled or postponed, and funds shifted to accomplish higher priority or more cost effective activities. Noxious weed control is usually done concurrently or as an opportunity with other vegetation management projects.

**Table 11: Intensive Management Activities on Board of Forestry
Lands – FY2006**

Board of Forestry Annual Reforestation and Young Stand Management Reports for 2006

Management Activity	Acres Planned	Acres Completed	Average Cost*/ Acre	Total Cost
Initial Planting	6,638	6,212	\$211	\$1,309,677
Interplanting	691	1,679	\$153	\$257,594
Underplanting	297	164	\$115	\$18,933
Tree Protection- Barriers	3,975	2,511	\$133	\$334,435
Tree Protection- Direct Control	4,963	4,290	\$34	\$145,728
Site Prep- Chemical -Aerial	4,520	2,749	\$68	\$185,990
Site Prep- Chemical -Hand	314	509	\$89	\$45,109
Site Prep- Slash Burning	723	459	\$101	\$46,574
Site Prep- Mechanical	652	611	\$178	\$108,854
Fertilization	4,100	2,835	\$102	\$289,170
Noxious Weeds	328	337	\$14	\$4,770
Release- Chemical- Aerial	1,919	522	\$68	\$35,715
Release- Chemical- Hand	1,356	764	\$80	\$60,772
Release- Mechanical- Hand	806	579	\$81	\$47,021
Precommercial Thinning	4,023	4,677	\$77	\$359,755
Pruning	164	61	\$120	\$7,310
Totals	35,469	28,959	\$112	\$3,257,406

2006 Road Accomplishments & Current Asset Replacement Values Update

Table 12 is designed to provide general information about the road systems on BOF lands as they vary by district. The information on 2006 roadwork is based on the estimates from timber sales from the AOPs. The road mileage reported in the table includes BOF lands only. Construction includes any new roads and reconstruction/relocation of abandoned roads. Road vacating is permanent closure of roads, including removal of stream crossings and complete stabilization of the prism.

District/ County	Aggregate/Paved Surface			Dirt Surface			Bridges
	Constructed	Improved	Vacated	Constructed	Improved	Vacated	
Astoria/ Tillamook Co.	1.4 mi. \$140,641	.23 miles \$565				.49 mi. \$11,569	
Astoria/ Clatsop Co.	19.2 mi. \$1,369,363	47.67 mi. \$1,059,425	1.78 mi. \$75,156	4.3 mi. \$63,785		3.27 mi. \$88,547	2 new \$115,522
Coos/ Coos Co.		4.66 mi. \$750		.24 mi. \$25,162			
Forest Grove/ Clatsop Co.	1.9 mi. \$74,300	1.7 mi. \$109,400		.1 mi. \$1,200			
Forest Grove/ Washington Co.	9.2 mi. \$446,300	6.5 mi. \$256,800					
Forest Grove/ Columbia Co.	1.2 mi. \$46,200	.1 mi. \$11,730	.3 mi. \$900	.1 mi. \$1,600			
Forest Grove/ Tillamook Co.	8.5 mi. \$511,500	15.8 mi. \$611,600	.5 mi. \$1,200	.1 mi. \$900		.3 mi. \$1,000	1 new \$83,900
Klamath-Lake/ Klamath Co.						13.9 mi. \$2,710	
North Cascade/ Marion Co.	.44 mi. \$5,560	6.62 mi. \$5,480		1.26 mi. \$27,780		3.27 mi. \$14,077	
North Cascade/ Linn Co.	.7 mi. \$32,054	7.61 mi. \$176,186		1.43 mi. \$36,968			
SW Oregon/ Douglas Co.	1 mi. \$18,869	.3 mi. \$670	.43 mi. \$4,720	1.2 mi. \$11,720			
Tillamook/ Tillamook Co.	1.9 mi. \$188,363	21.43 mi. \$979,752		1.36 mi. \$10,771		6 mi. \$47,520	
West Oregon/ Lincoln Co.	.1 mi. \$2,369	2.1 mi. \$85,936		1.8 mi. \$12,499			
West Oregon/ Polk Co.	.2 mi. \$10,441	1.7 mi. \$83,885		.3 mi. \$1,980			
West Oregon/ Benton Co.	.3 mi. \$16,638	.9 mi. \$45,746		.1 mi. \$343			
Western Lane/ Lane Co.	4.7 mi. \$408,910			.7 mi. \$4,772		.3 mi. \$na	

Comprehensive data on the effects of roads on other forest resources have been collected and analyzed for the Miami and Wilson (Tillamook District) and Upper Nehalem (Astoria and Forest Grove Districts) and is available elsewhere. This information describes the current condition of roads and drainage structure, and risks to streams and other forest resources. Analysis of this data has been used to recommend locations where road management can further be improved to reduce road risks, and has found that the vast majority of ODF roads pose low risk to resources.

Recreation Management Summary

Recreation Accomplishments

This year marks the sixth year of implementing Recreation Action Plans developed for the Tillamook, Clatsop, and Santiam State Forests as well as for the West Oregon district. All of these plans are intended to be 10-year plans under the umbrella of the NW Oregon FMP. Throughout the region as new trails and developed sites are constructed, state forestlands have evolved into popular recreation destinations attracting visitors from communities throughout the Willamette Valley. Hiking, mountain biking, and equestrian use of the trail system is increasing moderately while camping and day use activities are most popular during the summer months. Off-Highway Vehicle (OHV) use is increasing dramatically resulting in some trails being closed because of excessive resource damage until repairs can be made.

Table 13: Trail Project Summary

Activity	Tillamook State Forest	Tillamook State Forest	Clatsop State Forest	Santiam State Forest	West Oregon District
	Forest Grove District	Tillamook District	Astoria District	Cascade District	
OHV Trails					
New Trails Construction	.75 miles	.7 mile	0	0	0
Trail Upgrade/Improvement	17.75 miles	4.8 miles	0	0	.1 mile
Trails Maintained	58 miles	64 miles	0	0	4.2 miles
Non-Motorized Trails					
New Trails Construction	2.75 miles	.75 mile	3 miles	7 miles	.5 mile
Trail Upgrade/Improvement	1 mile	.5 mile	0	0	0
Trails Maintained	45 miles	14.5 miles	12 miles	16 miles	4.8 miles

Table 14: Number of Campers and Revenue from Campgrounds during FY2006

Campground	District	Campers	Revenue
Gales Creek	Forest Grove	3,428	\$9,958
Brown's Camp	Forest Grove	6,949	\$18,279
Stage Coach Horse Camp	Forest Grove	354	\$661
Elk Creek	Forest Grove	2,445	\$3,454
Reehers Camp (new)	Forest Grove	564	\$1,968
Jones Creek	Tillamook	4,582	\$21,076
Jordan Creek	Tillamook	336	\$1,103
Nehalem Falls	Tillamook	2,080	\$12,275
Spruce Run	Astoria	9,028	\$28,204
Gnat Creek	Astoria	1,016	\$1,658
Northrup Creek (new)	Astoria	(under construction)	0
Shellburg Falls	Cascade	*	0
Butte Creek Falls	Cascade	*	0
Santiam Horse Camp (new)	Cascade	(under construction)	0
Total		30,782	\$98,636

* Camper registration and fee collection implemented in June, 2006

Table 15: Summary of Volunteer Hours for Recreation Projects

	Tillamook State Forest District	Tillamook State Forest Tillamook District	Clatsop State Forest	Santiam State Forest	West Oregon District
Total Hours	5,796	2,256	1,540	2,000	3,850

Recreation Facility Development Projects

Each state forest and district that provides developed recreation opportunities has a 10-year plan that provides a prioritized list of facility development projects. Following is a summary of accomplishments during FY2006.

Forest Grove District

Lyda Camp

- Completed the site design plan and construction drawings and specifications for Lyda Camp OHV Staging Area

Reehers Camp

- Completed the construction of a 24' x 28' log picnic shelter at Reehers Camp.
- Installed the hand pump assembly for the well.
- Completed planting plan warranty work. Replaced 600 dead plants that were installed as part of the initial planting plan.

Browns Camp

- Constructed new drinking water well pad.
- Constructed a new garbage and recycling center in the day use area.

Gales Creek Campground

- Repaired the road through Camp Loop A.
- Replaced old picnic tables in the campground and day use area.
- Constructed log rail "safety" fence along tent site area and along Rogers Road

Elk Creek Campground

- Constructed new drinking water well pad.
- Upgraded the campground trail system to better meet ADA guidelines.

Gales Creek Overlook

Replaced the 200 foot log rail fence along the viewing area path.

Trail Planning

Wilson River Trail, Segment C (non-motorized)

- Completed a feasibility study that included field reconnaissance of the area between Storey Burn Trail and Elk Creek Campground that determined that it was feasible to extend the Wilson River Trail east from Elk Creek Campground to Storey Burn Trail.

OHV Trail Upgrade Project

- Completed field design and construction contract documents for contract upgrade of 9.5 miles of OHV Trail in the Browns Camp area.

Reehers Camp Trails (non-motorized)

- Completed the location and design of approximately 2 miles of trail in the Reehers Camp area.

Tillamook District

Wilson River Trail

- Work continued on the Wilson River Trail with volunteers and inmate crews from South Fork Camp working the Ryan Creek section. At the close of FY06 less than 2000' of trail remained to be constructed to complete the link between Footbridge Trailhead and Keenig Creek Trailhead.

Multiple Sites

In FY2006 ODF contracted out landscape design services for nine recreation sites five of which were in Tillamook District. The contract produced construction ready drawings for:

- Jones Creek Equestrian Trailhead
- Footbridge Trailhead
- Keenig Creek Campground
- Muesial Creek OHV Staging Area
- Hollywood OHV Staging Area & Campground

In FY2006 ODF staged over 1000 yards of pit run rock for hardening work on the Archers FB 4WD Trail. ODF and volunteers also upgraded and re-routed a steep section of the Jeep Trail.

Astoria District

Northrup Creek Horse Camp

- Construction of the facility was completed in the winter. The grand opening was held in May 2006.
- Additional trail work was completed on the trail system in the area.

Demonstration Forest

- The interpretive panels were installed.
- Improvements to the C.J. Reed Arboretum were made and a new brochure is being developed.

Trailhead and Trail Construction

- Trail construction east from Henry Rierson Spruce Run Campground continued.
- Construction of 1.75 miles of trail on Gnat Creek was completed through a contract.

Lost Lake

- Public use surveys began in June 2006 and will continue through October 2006.

Cascade District

Santiam Horse Camp and Rock Creek Campgrounds

- Final touches were completed on the Santiam Horse Camp and Rock Creek Campgrounds. These campgrounds were officially opened in June of 06.
- An estimated 7 miles of new trail construction was completed in the Monument Peak Area to coincide with the opening of the Santiam Horse Camp. These trails are nonmotorized multi-use trails for hikers, bikers and horse back riders.

Rhody Lake

- Two new campsites were installed at the Rhody Lake Campground. One campsite at the lake's edge was moved to a new location to protect resources and provide better access to the lake for day-users.
- A primitive day-use parking area was established for hikers to the High Lakes Trail located near Rhody and Butte Lakes.

Shellburg Falls

- A guard rail was installed at the lower Shellburg Falls Trailhead to create a safe viewpoint for visitors and school children who visit the area. A retaining wall was constructed on the Shellburg Falls Trail where it travels beneath the waterfall to widen the trail tread for safety purposes and protect the trail from erosion.

Education Program

- Recreation staff presented forest education programs to an estimated 1300 school children during FY2006.

West Oregon District

Mt. Baber ATV Area

- The ATV staging area at Baber Meadow was re-designed so that camping was removed from the area underneath the power lines. Nine sites were graded and rocked. In addition, a longer and safer children's track was constructed.

Blackrock Mountain Bike Area

- In June, 2006 the former Blackrock Freeride Association club filed for non-profit status as the Blackrock Mountain Bike Association. The club has now grown to over 200 members and continues to improve the trails within this riding area 3 miles west of Falls City. Portable restrooms were also installed at the trailhead at the expense of the club.

Research and Monitoring

The Forest Management Plans (FMPs) for state forestlands emphasize the need for adaptive approaches to management. Adaptive management requires a significant commitment to obtaining critical information over time and to ensuring that the information enters the decision-making process. The state forests research and monitoring program is in place to ensure that the levels of research, monitoring, and technology transfer are adequate to meet the information needs required by the long range management plans.

The State Forests Monitoring Program Strategic Plan (Strategic Plan) (ODF 2002) was approved as part of the Implementation Plan “package” for the Northwest (NW) and Southwest (SW) Oregon Forest Management Plans (FMPs). Although this plan primarily focuses on research and monitoring related to the NW and SW FMPs, its general approach applies to Elliott State Forest (ESF) and Eastern Oregon Area (EOA) forestlands as well.

The Strategic Plan is directly tied to the “working hypotheses” and forest management strategies identified and described in the FMPs. It sets a direction for monitoring and research work by identifying high priority projects that will contribute to our understanding of management strategy effectiveness and assumptions related to the FMPs. It also identifies priority research and monitoring themes which will translate over the next ten years into additional projects to contribute to the evaluation of the FMPs.

Two important objectives of the Monitoring Program are:

1. To determine whether FMP programs and strategies are implemented as stated, and
2. To determine whether FMP programs and strategies result in anticipated habitat for species of concern or other desired forest conditions.

As guidance in pursuing research projects and monitoring opportunities, several overarching research and monitoring themes have been identified that relate directly to the integrated forest management strategies and underlying assumptions:

- Implementation monitoring;
- Stand structure development and wildlife relationships;
- Hydrologic functions and aquatic and riparian habitat;
- Young stand development;
- Forest health; and
- Socio-economic indicators.

These themes are meant to encompass a problem area that includes a number of more specific issues and questions and, therefore, a variety of potential research and monitoring approaches to meet the information needs are possible.

Projects have been identified that will contribute to understanding the effectiveness of key management strategies, the underlying assumptions and the working hypotheses related to the FMPs. These projects are a high priority for ODF in this initial 10-year implementation period. They include:

- Implementation monitoring procedures and reporting
- The interaction between Swiss needle cast and commercial thinning
- Northern spotted owl and marbled murrelet surveys and site monitoring
- Assessment of young stand management strategies
- Stream temperature and riparian function
- Stand structure development and wildlife relationships
- Socio-economic indicators
- Public acceptance assessment

I. Updates of Selected Ongoing Research and Monitoring Initiatives

Implementation Monitoring

ODF adopted new Forest Management Plans (FMPs) for the southwest and northwest areas in 2001 that adopted structure-based management as a guiding principle. This approach is new to ODF and has required districts to alter their operational methodologies. The implementation monitoring (IM) project is the first opportunity for ODF to determine systematically whether operational goals presented in the FMPs are being implemented at the district level. IM seeks to answer the question, “Did we do what we said we were going to do?”

A pilot project protocol was developed in FY2005. It described a four-prong approach to answering the above question. First, a contract and administrative process review (CAPR) will assess consistency between contract documents and FMP strategies. In this process, contract administrators and monitoring staff answer a series of questions that were developed directly from goals and strategies presented in the FMPs. Second, stand-level inventory (SLI) will be used to assess operational practices in partial cut stands. Two new approaches have been developed to assess activities in clearcuts and riparian areas. A clearcut (CC) protocol will measure mainly quantitative data, such as green tree and snag retention and downed wood levels, and some qualitative data such as the spatial distribution of green trees and snags. A riparian area (RMA) protocol will measure similar attributes in riparian management areas and qualitatively assesses riparian management at both partial and clearcuts.

Twenty percent of all partial cuts and all clearcuts will be sampled by district by year, with a minimum of one operation of each type per district per year, if available. CAPR and RMA plots will be conducted for every operation as well as CC plots or SLI, depending on the type of operation. A goal of one type of each operation was set in the pilot project protocol; these operations have now been sampled.

Preliminary results indicate that methodologies are generally adequate with some changes necessary. Major changes include scheduling CAPR before, rather than after, site data collection and a revision of the RMA methodology to provide more precise estimates of stand characteristics. Minor revisions include a streamlining of data collection software and a slightly different sampling approach to provide landscape-level, as well as stand-level, estimates.

IM was initially designed to collect data on FY2002–FY2004 operations, but it has been recognized that there is an ongoing need for data of this nature to inform program objectives, such as performance measures, and inform the districts on implications of operational approaches on an ongoing basis. Data collected to date suggests district practices are consistent with FMP goals and strategies, but the data are too few for a statistical sample and thus are not presented here.

Swiss Needle Cast and Commercial Thinning

The purpose of the project is to determine the interaction between thinning of older stands (30+ years old) and disease severity and intensity of thinning. The approach includes a combination of a retrospective study of stand growth since thinning with permanent monitoring plots to track future growth.

Results from the retrospective study indicated a positive response to thinning in many stands. These results were incorporated into a revision of the ODF Swiss needle cast (SNC) Strategic Plan (September 2003). In summary, study results to date indicate that thinning does not increase SNC severity and that the average stand showed a positive basal area growth response to thinning regardless of SNC severity. These results are reinforced by initial information from 2 years of current growth data (not retrospective) from the permanent plot portion of the study. The study will continue, with additional plot measurements and analysis scheduled for 2007.

These results are significantly influential to the Tillamook District, where district plans are governed by decisions on SNC management. West Oregon and Astoria districts were less affected by the research results. In response to the research findings, actions have already begun or are under consideration to adjust the AOPs and IPs for the Tillamook district.

At the AOP level:

- Develop and apply SNC stand assessment tool (Currently being tested by OSU and ODF; see descriptions under “Stand Growth Assessment Tool”)
- Adjust thinning prescriptions to reflect recent research and to meet various objectives.

At the Implementation Plan (IP) level, and via Harvest and Habitat (H&H) model:

- Incorporate recent SNC information into the H&H model. Document SNC model inputs and assumptions.
- In initial modeling runs, harvest “severe” SNC stands over 20 years.
- In future modeling, develop some SNC “scenarios.”
- Reflect recent SNC findings in a revised Tillamook IP. In the IP, for the purposes of SNC management, more stands should be identified as potential candidates for commercial thinning, and fewer stands identified as regeneration harvest candidates.
- IPs should remain sufficiently flexible to take advantage of new information or a status change in SNC.

No changes at this time were recommended at the FMP level.

Stand Growth Assessment Tool

Douglas-fir stands infected with SNC have shown conflicting growth responses in which some stands grow extremely well while others put on little volume. This has important implications for forest managers who must decide how to manage infected stands. The current convention directs foresters to clear cut stands if they have needle retention levels below a minimum threshold. However, using SNC severity alone, as estimated by needle retention, to prioritize harvest plans does not consider growth as a factor. As a result, there is a need for a method to determine treatment priorities that is based on expected stand growth results.

In response to this need, Doug Mainwaring (OSU), Nate Coleman (OSU), and ODF developed the Stand Growth Assessment Tool program “which allows the user to examine how a particular stand is growing in relation to growth model estimates of how it would be growing in the absence of Swiss needle cast. By doing so, stands may be ranked by their current performance relative to expectations, allowing informed decisions on the value of holding, thinning, or clearcutting them.” (Doug Mainwaring, unpublished information). The Stand Growth Assessment Tool is a derivative of the original Swiss Needle Cast Stand Evaluation Software (SNCSES) program developed by Doug Mainwaring and Nate Coleman.

The primary function of this assessment tool is to assist forest managers in making definitive decisions on harvest prescriptions for a stand using a combination of real and modeled quantitative growth values. The program is currently in the final stages of development and operational trials are currently being conducted in the Tillamook district.

Northern Spotted Owl Surveys of the Tillamook Burn

The ODF manages a large portion (approximately 286,282 acres) of the historic Tillamook Burn. Within this area, approximately 157,000 acres was burned in multiple fires and has been determined by ODF to constitute a very large expanse of unsuitable and marginal quality habitat for northern spotted owls.

ODF has been conducting monitoring surveys for Northern spotted owls in order to determine if any resident spotted owl activity centers exist within this area. ODF has partitioned this landscape into 15 discrete sampling units that will be surveyed in a random order over the next 10 years. Three units will be surveyed for 2 years each, until all 15 of the units have been surveyed. The first year of surveys for the project were implemented 2003.

To date, there have been no observations of Northern spotted owls resulting from this project. In 2003, barred owls were reported from all three survey units. In 2004, barred owls were reported in one unit and in 2005 they were reported in two units. The results of these surveys will allow ODF to determine if and when it is appropriate to begin considering the Burn as potentially suitable habitat for northern spotted owls.

Stream Temperature and Riparian Function

This project is designed to provide information to assess the effectiveness of the Aquatic and Riparian Strategies. This is a joint project of the State Forests and the Private Forests Monitoring Programs. The project started in June, 2002 and is being conducted on both privately and state-owned forest land. A pre/post- study design that established control, treatment, and downstream reaches is being used. Water temperature, channel, overstory and understory riparian characteristics will be monitored two years prior to harvest and for five years after harvesting to evaluate harvest effects and recovery rates.

RipStream is addressing the following monitoring questions:

1. Are the riparian rules and strategies effective in meeting DEQ water quality standards regarding anti-degradation of stream temperature and the water quality standard?
2. Are the riparian rules and strategies effective in maintaining large wood recruitment to streams, downed wood in riparian areas, and shade?
3. What are the trends in riparian area regeneration?
4. What are the trends in overstory and understory riparian characteristics and how do they along with channel and valley characteristics relate to stream temperature and shade?

Pre-harvest data from all sites have been collected and are currently being analyzed. Post-harvest measurements have been conducted on 25 sites. The first interim report will be available in mid-2006. A final report is expected in 2009.

Stand Structure Development and Wildlife Relationships

A key assumption of the forest landscape management strategies is that they will enhance the development of complex stand structure and thus provide for native species habitats. The stand structure project was implemented to address several questions related to this assumption.

The first phase of the project was a problem analysis to determine what information is already available and what techniques we have to address these questions. The analysis, completed in 2003, linked FMP stand structure types and structural elements to wildlife habitat characteristics and makes recommendations for options to study the effectiveness of the strategies in the field.

One recommendation from this assessment is that a coarse filter monitoring approach would have a high applicability to answering questions about habitat effectiveness at a low relative cost. Coarse filter monitoring is defined as monitoring the amount, distribution, or characteristics of habitat components, stands or landscapes, rather than directly measuring response of any wildlife species directly. Coarse filter monitoring would be appropriate to use for species that are strongly associated with specific habitat attributes that we are managing for and that can be measured. A draft assessment of which species can be monitored using a coarse filter approach was completed in 2004, and will provide the basis from which to make predictions about which species we can expect to be associated with the habitats developed through active management.

The second phase of the project is the development of a field study to address issues raised in these assessments. The objective of the study is to examine how stand structure conditions are changing as a result of management prescriptions and to determine whether post-harvest stand structure conditions are developing as anticipated.

Current stand structure types describe the condition of a stand at a particular time but does not describe the process of stand development between structure types or within a structure type. It also does not identify indicator variables capable of describing whether a stand is on a particular pathway toward a defined desired future condition. A more detailed examination of stand structure conditions, attributes, and development over time will allow a better description of stand processes and indicators.

Six analytical questions will be addressed in this phase of the study:

1. Have post-operation stand conditions developed as anticipated since harvest, within the first 5 to 10 years and continuously beyond this period?
2. What parameters can be used as indicators to describe whether the stand is developing toward a defined desired future condition?
3. Are pre-determined indicators effective in describing whether the stand is developing toward a defined desired future condition?
4. What structural attributes are beginning to develop during this timeframe?
5. What variables influence the development of stand structure attributes and how quickly do they develop?
6. Are the models used to define our stand structure types valid?

Currently 76 sites have been selected for this study from the NW Oregon districts. Data collection is planned to begin in the fall of 2006. A report including results to date will be completed for the 10-year FMP review in 2011. The study will also continue as a long-term study for decades afterward in order to better describe the process of stand structure development.

The third phase of this project proposes to monitor the guild of diurnal songbirds across the plan area, sampling all stand structure types. By sampling point counts over time, trends in species relative abundance can be measured. The initial analysis would focus on Partners in Flight focal species that utilize different forest conditions that approximate our structure types. The outcome of this approach would be to inform ODF about whether we are managing for these habitat attributes that are closely associated with some species of birds. As additional information about species and habitat relationships becomes available over time, the data will be available to evaluate other species in addition to the focal species.

The objectives of this aspect of the stand structure project will be to: 1) determine if stand structures are providing habitat for focal bird species of interest at both the stand and landscape scale; 2) determine if management for these structure types is effective in providing habitat for focal species of interest; and, 3) determine if management for these structure types is effective in providing habitat for other bird species.

Evaluating the Effectiveness of Aquatic and Riparian Strategies: A Watershed Scale Approach

The NW State Forests are committed by the Forest Management Plan (FMP) to evaluate if the aquatic and riparian strategies are effectively achieving desired outcomes. Strategies that could be addressed include site-specific (riparian and aquatic), landscape (roads) and watershed scale (salmon anchor habitat) approaches.

Currently there are monitoring programs in place to assess effects of forest management on riparian and aquatic resources at a reach scale. At question are potential cumulative effects of forest management that may result from non-detectable effects of multiple reaches in a watershed. This means that monitoring efforts to assess effectiveness of our protection, management and restoration practices must be done at a watershed scale. Watershed scale effectiveness monitoring has the potential to quantify the effects of specific practices or policies and link those effects to local and downstream conditions, watershed conditions, and cumulative effects.

Accomplishments to Date (March 2006):

- Completed a comparative analysis describing watershed scale studies and key decision points for ODF (received technical review).
- Described available resources and initiated partnerships to implement the study.

Next Steps:

- Continue to build partnerships with local and non-governmental groups and define these roles.
- Finalize draft study design and send out for peer review.
- Form an external review committee comprised of interested parties to support project, review science, understand outcomes, provide feedback, and share findings with their organizations.
- Come to common agreement on priority questions and objectives that can be addressed at larger basin scales (extensive).
- Acquire grant support for capital expenses for intensive work and both capital and operational expenses of extensive work.

It is anticipated that results from this project would inform changes at the FMP level as well as changes to the implementation and/or annual operation plans at the district level. Preliminary results should be available in 2011 for the first 10-year review of the FMPs.

Influence of Mineral Nutrition on Susceptibility and Recovery of Planted Seedlings to Animal Browse

The regeneration phase in forest management is critical to ensuring that appropriate objectives related to ensuring species diversity, site productivity, and habitat conservation is met. Animal browsing, mostly in the form of elk and deer have a severe impact on artificial reforestation success in the Oregon Coast Range, often resulting in reduced plantation establishment success.

This study is examining the use of fertilization to enhance nutrient reserves and facilitate rapid seedling growth, while simultaneously enhancing potential for recovery from animal browse. Anecdotally, some evidence exists suggesting that seedlings with higher foliar nutrient contents are more likely to suffer browse damage. Thus, it is important to examine animal browse damage response of different species to a range of fertilizer rates. Little published research, however, has examined this response in common reforestation species of the Pacific Northwest.

The overall goal of this study is to determine which nutrient content levels (resulting from fertilization at planting) will result in the establishment of vigorous seedlings which are resilient to animal browse. This will be accomplished for Douglas-fir, western hemlock, and western red-cedar planted onto a range of sites within the Tillamook district. Seedlings in all treatments will be consistently monitored over a five-year period for growth, foliar nutrient contents, and susceptibility/recovery from animal browse. We expect that this information will yield practical, useable scientific results regarding the efficacy of treatments that may help reduce damage and costs associated with animal browsing during the reforestation process.

Young Stand Management

This project is designed to determine whether early stand management has foreclosed options for older stands to develop all desired structural components.

The first two decades are a very dynamic period in Douglas-fir plantations when components considered critical habitat for several species, such as crown structure and understory vegetation, are changing quickly and are very responsive to manipulations. This study explores alternative management approaches in young plantations to minimize negative aspects of the stem exclusion phase. Specifically, an Observational study quantified how various stand structural components are influenced by stand density over time in young Douglas-fir plantations. As a follow-up, a Manipulative study was setup to determine whether density management can slow down or reverse undesirable trends in young plantations.

Using a chronosequence approach, stands for the Observational study were selected in winter 2003 along an age continuum between 6-20 years old in three ODF districts (Astoria, Forest Grove, and West Oregon). Plots were placed along transects to ensure coverage of low, medium, and high densities (gap, transition, matrix). Tree characteristics and understory vegetation were measured in spring and summer. Data analysis began in late fall and preliminary results were summarized for presentation at the Young Stand Management Workshop (November 25, 2003). The Workshop was organized to gain insight from folks in different agencies on the issue of managing young Douglas-fir stands for structure. Preliminary data were also presented at the State Forests Conference (March 10-12, 2004) by Klaus Puettmann (Principal Investigator).

Data from the retrospective analysis indicate that some trends in stand development develop earlier than commonly assumed. Tree growth in young stands was positively related to stand density, but this trend reversed fairly early. Crown characteristics were influenced very early by stand density, indicating that maintaining a long live crown in typical plantations can only be accomplished by lowering stand density through pre-commercial thinning. Understory herb cover was reduced over time, while shrub cover increased. Species compositions were quite complex, with an initial strong presence of invasive species and later dominance of species usually associated with mature forests. However, there were many exceptions and early successional species were still present after 20 years. These results of the retrospective analysis show that this early stage is very complex and the dynamics vary for different characteristics.

The retrospective showed that any gaps or openings in young plantations may provide for a diversity of within-stand conditions that may affect the role and impact of the stem exclusion phase on development of stand composition and ecosystem functions. Even if gaps are created over time due to various mortality agents, it appears that stand modifications of standard management operations are necessary to ensure gaps that have fully developed shrub, herb, and hardwood vegetation layers.

The results of the Observational study, findings from other recent studies and discussions with ODF personnel determined that gaps (low density areas) can provide opportunities to maintain or enhance biodiversity in Douglas-fir plantations. The specific objective of the Manipulative study was to document development of natural gaps and compare them with managed gaps, i.e., gaps treated to maintain or enlarge their size. In keeping with the goal to avoid, rather than reverse undesirable trends (e.g., crown recession) in stand development, 10 to 13-year old stands studied in the Observational study were used in the Manipulative study. Thus, we followed individual gaps and documented 20 to 24 gaps within a stand (one stand per ODF district) in each of the three districts (described above). Gaps were either left untreated or enlarged by cutting trees a 20 ft buffer around the gap. Plot installation occurred in winter 2004 and tree characteristics and understory vegetation were measured in spring and summer, 2004-2005. Initial data indicate that conditions in gaps prior to treatments were very similar and future differences between treatments can likely be attributed to management efforts. Periodic (2 to 4 year interval) re-measurements are planned through 2014.

In addition, questions were raised whether standard plantation management practices provide for gaps or whether additional management to create gaps was needed. As a follow up, we initiated a gap inventory study with the objective to provide baseline information about diversity of conditions (i.e., area in gaps versus fully stocked areas) created by standard management operations in plantations on ODF land. The investigation indicated that gaps make up a minor proportion of Douglas-fir plantations on ODF land. Even if gaps are created over time due to various mortality agents, it appears that stand modifications of standard management operations are necessary to ensure gaps that have fully developed shrub, herb, and hardwood vegetation layers. In comparison, gaps that appear or are enlarged in later developmental stages would have reduced understory vegetation, as a consequence of early stand development, as new invasion would be required to provide desirable stand structural components. In any case, concerns about the total plantation area not growing crop trees would need to be assessed before management actions occur.

II. Planned Research and Monitoring

Marbled Murrelet Management Area Habitat Monitoring

The marbled murrelet is a federally-listed seabird that nests on mossy platforms on the limbs of old trees up to 55 miles inland in coastal western North America. ODF has adopted policies to identify, protect and maintain suitable nesting habitat on state-owned forestland. Stands within range of the ocean are surveyed for murrelet presence before any logging activities are allowed. If murrelet presence in a stand is confirmed, Marbled Murrelet Management Areas (MMMA) are established that govern allowable practices in that area. In addition, some districts have been experimenting with novel silvicultural prescriptions to encourage the development of nesting habitat faster than it might occur either naturally or with standard thinning regimes. This project will address:

1. Are MMMA effective at protecting and maintaining murrelet nesting habitat in areas where their presence has been confirmed?
2. Are experimental silvicultural prescriptions effective at enhancing nesting habitat over time?
3. Do these prescriptions result in other habitat characteristics that reduce the value of these stands as nesting habitat? For example, do these thinnings increase the desirability of these stands to corvids (crows, ravens and jays – all murrelet predators), and thus increase their relative abundance?

This project will track habitat characteristics important to murrelet nesting habitat such as the number and size of suitable nesting platforms and the relative abundance of corvids over time. Since these habitat characteristics develop slowly over time, this is envisioned as a very long-term study. Data will be collected prior to and immediately after harvest, and again every 5-10 years. Protocol testing began in FY2006. A final protocol will be developed in FY2006 and data collection will begin in FY2007.

Forest Health

Swiss Needle Cast

Swiss needle cast (SNC) is a native disease of Douglas-fir that has intensified dramatically in coastal western Oregon since 1990. Although the disease occurs throughout the range of Douglas-fir, it is most severe in the forests on the west slopes of the Coast range.

The main effect of SNC on forests is reduction of tree growth and vitality. Within 18 miles of the coast in northwestern Oregon, the disease has reduced recent annual volume growth of 10- to 30-year-old Douglas-fir plantations by an average of 23 percent, with some plantations experiencing growth loss in excess of 50 percent. Growth loss due to SNC in this area alone exceeds 40 million board feet per year. In addition to growth impacts, SNC alters wood properties, lowers green tree moisture content, and affects stand structure and development. This complicates stand management decisions, especially in pure Douglas-fir stands.

Aerial surveys to detect and map the distribution of SNC damage have been flown annually since 1996. The 2006 survey mapped 324,584 acres of Douglas-fir forest with obvious symptoms of Swiss needle cast, which is a marked increase compared to the previous three years (figure 2). The easternmost area with obvious SNC symptoms was approximately 28 miles inland from the coast in the Highway 20 corridor, but the majority of area with symptoms occurred within 18 miles of the coast (figure 3). Survey conditions were excellent and the observers considered the 2006 survey to be the most reliable to date.

The total amount of forest affected by Swiss needle cast is much greater than indicated by the aerial survey maps because the aerial observers can map only those areas where disease is severe enough to be visible from the air. Although the acreage estimates are conservative, the survey does show the distribution of Douglas-fir stands with moderate to severe damage, and coarsely describes the trend in damage over time.

Permanent plot monitoring from 1997 to 2005 provided little evidence of a large change in damage from SNC during that period. The data showed a recent slight increase in the proportion of the area with moderate damage and a decrease in the proportion of the area with severe damage. However, the overall poor needle retention in the sample population suggests a continuing severe growth reduction from SNC.

Data from a six-year study of paired pre-commercial thinning plots show that thinning does not make SNC worse, and a trend appears to be developing for improved needle retention in thinned plots. Pre-commercial thinning remains a viable stand management tool in all but the most severely damaged stands.

Results thus far from an ongoing study of the interaction between SNC and commercial thinning show that: 1) thinning does not increase SNC severity; 2) residual trees respond positively to thinning; 3) the magnitude of growth response to thinning declines with increasing SNC severity; and 4) conventional thinning regimes should be modified for different levels of SNC damage. Specifically, stands with

moderate to severe SNC damage should be thinned more lightly and carried to a higher relative density that similar healthy stands.

Commercial thinning with some modification from traditional regimes is a viable silvicultural tool in all but the most severely damaged stands. For stands with moderate SNC damage, commercial thinning can be used to develop a diversity of stand structures with little risk of causing further growth decline. In severely damaged stands commercial thinning may not result in an economically positive or ecologically beneficial stand-level growth response, but still may be an option to achieve certain objectives. Stands such as these may have underlying problems (seed source or location) that often make them good candidates for regeneration harvest and establishment of more appropriate species mixtures.

Figure 2. Trend in area of Douglas-fir forest in western Oregon with symptoms of Swiss needle cast detected during aerial surveys in April and May, 1996-2006.

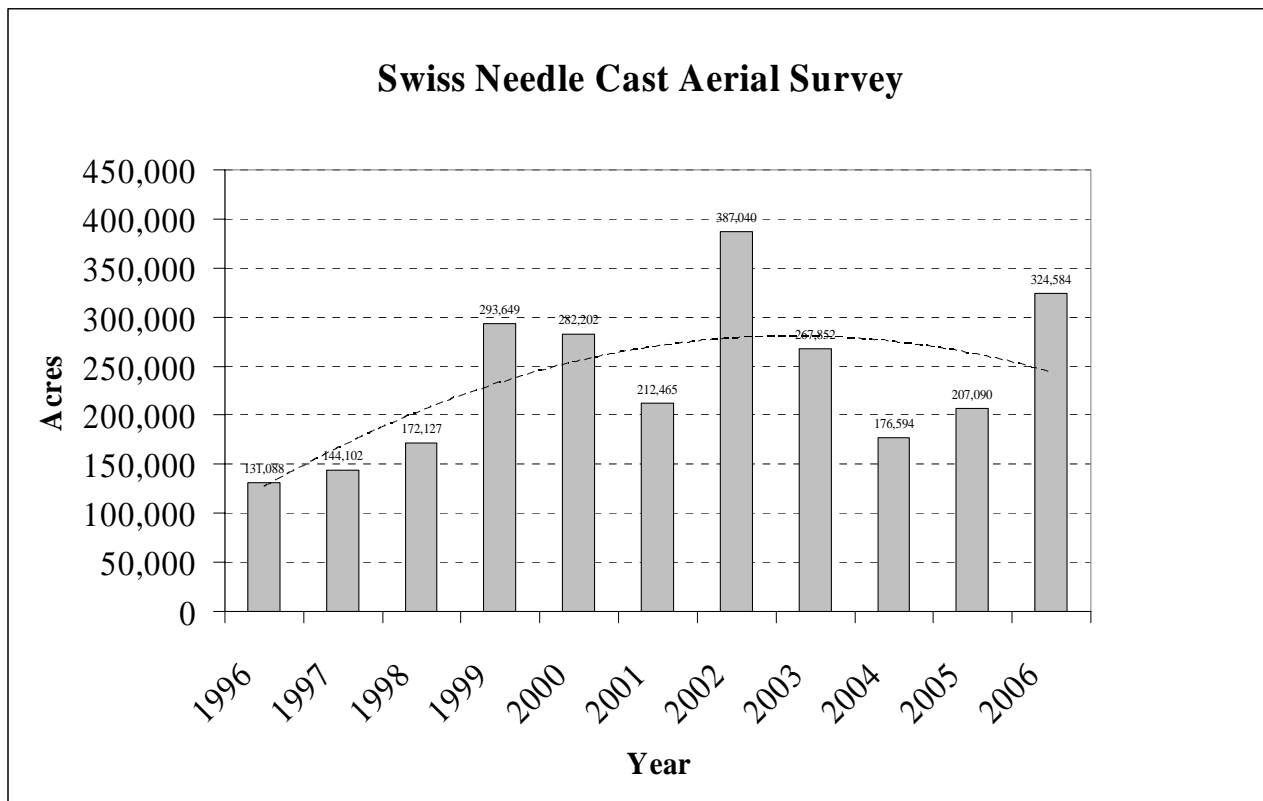
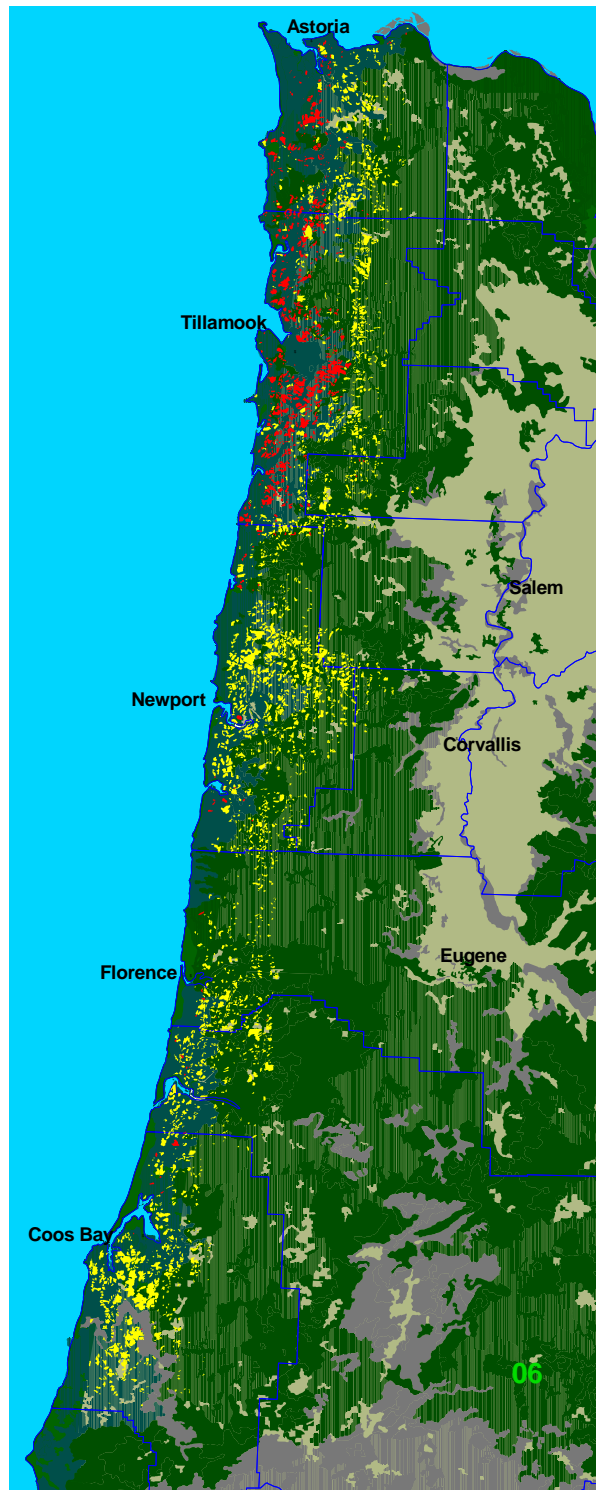


Figure 3. Areas of Douglas-fir forest in western Oregon with symptoms of Swiss needle cast detected during an aerial survey in May, 2006. Yellow = moderate damage; Red = severe damage.



Sudden Oak Death

Sudden Oak Death (SOD), caused by the new invasive pathogen *Phytophthora ramorum*, was first discovered in Oregon forests in July 2001 near the city of Brookings. The disease probably was present there since 1998 or 1999. Since September 2001, state and federal agencies have been attempting to eradicate the pathogen by cutting and burning all infected host plants, and adjacent apparently uninfected plants. Eradication currently is in progress on approximately 58 sites, totaling 130 acres. The majority of sites are on private land. All eradication funding has come from the United States Department of Agriculture (USDA) Forest Service.

Distribution of the pathogen in Oregon forests remains limited to a very small area near Brookings. Repeated aerial surveys and ground-checks have failed to detect the pathogen in forests beyond this area. Vegetation surveys and stream water sampling throughout western Oregon also have failed to detect the pathogen. The forested area in Oregon under regulation by the Oregon Department of Agriculture and USDA- APHIS is 24 mi². Intensive and extensive monitoring and eradication activities in Oregon forests likely will continue for several years.

USDA Animal and Plant Health Inspection Service, Plant Protection and Quarantine (APHIS-PPQ) regulations prohibit the interstate movement of any listed host plants and associated articles from quarantined areas. Some foreign countries have adopted regulations that affect specific counties or the entire state. Current federal regulations restrict interstate movement of all parts tanoak and other host plants. Douglas-fir is a special case in which foliage is restricted (includes seedlings, branches, and Christmas trees) and logs are not. The rationale is that only Douglas-fir foliage has been shown to be infected by *P. ramorum*, thus the risk of spreading disease on logs is minimal. Some other countries, however, have applied quarantines to any part of Douglas fir, including logs. If *P. ramorum* spreads to other areas of the state, regulations will change and likely will affect trade and transportation of Douglas-fir logs and other forest products.

Nursery seedlings, Christmas trees, and boughs all are subject to federal and state regulations. To date the impact of regulations on trade in these products has been minor because the regulated area in Oregon is limited to the 24 square mile area near Brookings. In anticipation of possible changing regulations, the Oregon Department of Agriculture (ODA) and various stakeholders have developed *P. ramorum* certification rules for Christmas trees and greenery. These rules are designed to facilitate marketing of these products while minimizing the risk of spread of *P. ramorum*. The rules involve voluntary compliance agreements based on inspection, testing, and certification of sources of host plant material as being free of *P. ramorum*. Laboratory testing is done by the ODA and billed to the landowner.

Laminated Root Rot

Laminated root rot, caused by the native fungus *Phellinus weirii*, is one of the most damaging diseases of Pacific Northwest Conifers. It is particularly damaging to Douglas fir in western Oregon, where 3 to 5 percent of the Douglas-fir forest type is infested. Occurrence is highest in northwest Oregon, where approximately 10 percent of the Douglas-fir forest is infested.

The pathogen decays tree roots and either kills trees directly or causes them to fall over while green. The disease is highly contagious, spreading from tree to tree across root contacts. This results in expanding disease patches that create openings in the stand where trees have died and fallen over. Although the openings can be beneficial for plant species diversity, stand structural diversity, and wildlife habitat, they also can account for much loss of timber volume.

In the Northwest Oregon Area root disease management strategies balance the needs for wildlife habitat and maintaining good site productivity. Each year approximately 1,500 acres are surveyed for root disease and GIS maps are created showing the size and location of disease patches. A disease management plan is developed based on the number and distribution of these patches as well as the specific management objectives for the stand.

Disease management emphasizes changing stand composition to favor tree species that are resistant (cedar, white pine), tolerant (western hemlock, noble fir), or immune (red alder) to laminated root rot. Most often this is done following a regeneration harvest. If a treatment is deemed necessary during thinning, all host trees within disease patches plus a surrounding buffer of healthy-appearing trees are cut to prevent further expansion of the disease. If the patches are large enough, they are planted with tree species that are resistant or immune to laminated root rot. The resulting stands are structurally and compositionally diverse while maintaining good tree growth and site utilization.

Spruce Shoot Dieback

An unusual amount of new shoot dieback and foliage loss on Sitka spruce was reported along coastal roadways in late spring and early summer of 2005. Initial symptoms included bleaching of the 2005 needles, which eventually turned brown and fell from the shoot. In many cases the entire shoot turned brown and remained on the tree through summer. Damage was most severe in the lower crown, and appeared to progress gradually upward. Damage generally was restricted to exposed sides of trees, especially along roadsides and other openings. Although some of the damage resembled that of spruce aphid, new shoot dieback of this sort has not previously been attributed to aphids. Attempts to associate fungal pathogens with the shoot dieback and foliage loss were unsuccessful at several laboratories. The most likely cause of the damage was an interaction between extremely high late-May (2005) temperatures and toxins injected into spruce by aphids. Damage did not recur in 2006.

Tillamook Forest Center Summary

The Tillamook Forest Center opened in FY2006, culminating a 10-year development process and incorporating the Tillamook State Forest Education and Interpretation Program (which has been reported on in past annual reports). In addition to completing construction, staff produced significant public education and outreach during this period, interacting with more than 20,000 people through public contact, programs, events, and tours. The program also produced and maintained communication tools and facilities that reached, and continues to reach, tens of thousands of forest visitors with information about the Tillamook State Forest.

Background

The center and its programs strive to help Oregonians and visitors understand and appreciate the Tillamook State Forest, its natural and cultural history, and its management. We work toward this vision by providing a broad range of ever-evolving educational experiences for students of all ages, with emphasis on preschool through twelfth grade students and their teachers, and on a wide variety of on-forest interpretive programs and communication tools.

Education Programs

Between July 2005 and June 2006, we reached 2,362 school children—preschool through twelfth grades—with a wide variety of programs. Our field-based programs served almost 900 students and almost 500 adults who accompany them on trips. We also continued to take our programs directly into classrooms, where we interacted with nearly 1,500 students. The program served other students through a variety of service learning projects, special events, career fairs and other programs.

Similar to last year, we wanted 80 percent of the program evaluations to indicate that “most” or “all” of the students enjoyed their experiences and were able to accomplish the learning objectives. Teachers who responded on our program evaluation forms indicated that 100 percent of their students enjoyed their learning experiences with us. Teacher responses also indicated that more than 90 percent of the time, most or all of their students were able to accomplish our learning objectives.

In July, we offered the Tillamook State Forest Discovery Day Camp for 20 youth, ages 11 to 13. Campers received approximately 40 hours of forest education during a week-long day camp session that included one overnight stay. The students’ comments demonstrate an overwhelming enthusiasm for the camp and associated activities, enjoyment of learning in natural settings, and a desire to learn more about forests.

Interpretive Programs and Tools

Although our curriculum-driven education programs typically target school age children in relatively captive audiences, interpretive programs target a less formal, typically older and more leisure-based

audience. These are typically forest visitors or others interested and willing to attend evening and weekend programs.

During FY2006, our programs reached 3,434 people, a major increase from past years as a result of more diverse program offerings. More than 1,387 of these people attended one of our forest-based interpretive programs conducted in campgrounds, on trails, and at the Tillamook Forest Center. The remaining contacts were made during special programs, fairs and events, and on-board the Port of Tillamook Bay sightseeing train while traveling through the Tillamook State Forest.

Additional Funding

The Tillamook Forest Heritage Trust, a non-profit organization that serves as catalyst for the public-private partnership that helped develop the Tillamook Forest Center, is now focusing on endowment fundraising to assist with Center operation costs. Additional operation funds are coming from entrepreneurial revenue streams from the gift shop, facility rental and food concession at the Center; funding from OPRD's Parks and Natural Resources Fund; and ODF's share of the Forest Development Fund.

Tillamook County provided a leadership grant of Title III funds that helped build the center and other counties have joined in support of the project, with grants coming from Columbia, Coos, Clackamas, Douglas, Jackson, Klamath, Lane, Lincoln, Marion, Polk and Washington counties.

For more information, visit the center on the web at www.tillamookforestcenter.org



Above, Retired State Forester Ed Schroeder, 92, prepares to cut the ribbon as former State Forester Jim Brown and members of the Nels Rogers family look on.



State Forests Reports

The information in this section is intended to highlight significant projects or management efforts that are not specifically summarized or addressed in other sections of this report.

Tillamook State Forest

The Tillamook and Forest Grove Districts manage the Tillamook State Forest under the Northwest Oregon State Forests Management Plan (NWFMP), adopted in 2001.

The districts continued stream-improvement projects by working cooperatively with Oregon Department of Fish and Wildlife (ODFW). ODFW biologist Dave Plawman, whose position is funded by ODF through an interagency agreement, worked on large wood debris projects. In addition, all potential Type F streams were surveyed for fish presence in the Wilson River Watershed in preparation for the Wilson Watershed Assessment project currently in development.

Tillamook District completed 29 bridge inspections through contract. As a result of the inspections, the District Road Crew completed minor repairs to 3 bridges and a weight restriction has been placed on one bridge in the Miami River Basin.

Tillamook District continues to operate the fish traps on the Little North Fork Wilson River and Little South Fork Kilchis River to monitor smolt and fry out migration. The second year of the lifecycle-monitoring project on the East Fork Trask has been completed in cooperation with ODFW. The lifecycle-monitoring project includes counting adult fish migrating up river from September through May and a fish trap to monitor smolt and fry out migration from March through May.

Tillamook District completed projects to improve .25 miles of stream habitat and to provide fish passage to .85 miles of historically accessible habitat. The projects involved placing 6 trees in-stream and installing fish passable culverts to replace 3 existing culverts at a cost of \$35,076. Funding for the projects was through ODF timber sale revenue.

About 6 miles of road were vacated on the Tillamook District through a combination of timber sale projects and district road crew operations. A total of 36 miles of roads were improved and 35 miles were brushed as timber sale projects. An additional 33 miles were brushed under a district service contract.

Other accomplishments on the Tillamook District: The removal of 5 log fills to allow the unrestricted flow of streams, the stabilization of two large landslides, the relocation of .15 miles of road to reduce the potential for washout or landslide, the pullback and stabilization of 3.7 miles of road and the installation of 30 culverts to allow for 100-year flow requirements.

The Tillamook District Recreation Program continued the administration of the Tillamook State Forest Law Enforcement Program, providing three full-time deputies and one additional deputy May through

September. Fifty percent of the cost of the law enforcement program was provided through grants from the Oregon All Terrain Vehicle Allocation Funds.

An Intergovernmental Agreement with Tillamook County to provide funds from timber sales in the Tillamook District's portion of the Trask Basin to improve the Trask River County Road to address safety concerns has resulted in FY2006 payments in the amount of \$542,075. The total payments to date are \$681,245 with a total estimated cost of the improvements of \$1.3 million.

The Forest Grove District and South Fork crews treated approximately 5 miles of stream banks on the Wilson River for Japanese knotweed using chemical and mechanical methods. Japanese knotweed is a noxious weed that crowds out native species and is more aggressive than Scotch broom and Himalaya blackberry. Continued efforts are being taken to keep Scotch broom at bay in the District.

The Forest Grove District and Tillamook District continue to experience a high demand for special forest products. Three hundred eighteen Special Forest Products permits were sold generating \$37,755 in revenue. Special Forest Products covered by those permits were predominately salal, moss, and mushrooms. Personal use firewood permits (1,151) were issued generating \$11,151 in revenue.

Surveys for threatened and endangered species continued on the Forest Grove District. There were no new owl sites established in 2006, and there were no changes in occupancy status (i.e., no upgrades from Resident Single to Pair and no sites went historic) to the five owl sites the district is currently protecting.

The Forest Grove District continued working on several watershed analyses. The Upper Nehalem Watershed Analysis being done in conjunction with the Astoria District was completed. The Wilson River Watershed Analysis being done in conjunction with the Tillamook District was started. District staff is actively collecting road and recreation information for this analysis and are participating on a pilot Transportation Planning team.

The Forest Grove District improved two stream crossings for fish passage. Two existing culverts were replaced with embedded culverts. These projects opened approximately .75 miles of stream to upstream migration of adult and juvenile fish. One bridge was constructed at a new site - fish passage was not an issue at this site. In addition, 1.1 miles of road were vacated. Appraised cost for this work totaled \$113,400.

Clatsop State Forest

The Astoria District manages the majority of the Clatsop State Forest with minor portions managed by the Forest Grove and Tillamook Districts. The Astoria District continues to implement the goals, objectives, and strategies of the Northwest Oregon State Forests Management Plan (FMP) adopted in 2001 and our District Implementation Plan, which was approved in March 2003, on approximately 137,000 acres. Board of Forestry accounts for slightly over 98% of the ownership of the Forest; the remaining portion is Common School Fund Land.

Timber harvesting operations including thinning, regeneration harvests, and patch cuts continued as the primary tools used to actively achieve stand structure targets set out in the FMP. Timber harvest volumes for the FY2006 included 82,894 MMBF generating just over \$30 million in timber revenue, with \$19 million distributed to Clatsop County.

In the past fiscal year, the district was able to complete all of the fieldwork and contract preparation for all planned FY2006 timber sales, as well administering an Astoria District Stand Level Inventory (SLI) contract.

The district continues to experience a high demand for special forest products. Twenty-five commercial permits were issued generating \$6,255 of revenue. Special forest products included Boughs, Ferns, Moss, Mushrooms, Rock, Salal, Vine Maple, Alder, Pulp Decks, and miscellaneous plants.

The grand opening of Northrup Creek Horse Camp was celebrated in May of 2006. The facility adds 11 new campsites to the districts growing recreation program. The interpretation signing for the district's demonstration forest and new plantings in the C.J. Reed Arboretum have been completed, adding an opportunity for visitors to learn more about forestry and tree identification.

The district is considering development of recreation facilities at Lost Lake. A recreation user survey was developed with Oregon State University to measure public perceptions about development and current use. Surveys will be conducted through October 2007.

The Clatsop District expanded its trail network by adding almost two miles of hiking trail near Gnat Creek Fish Hatchery. The equestrian trails near Northrup Creek were expanded by another mile, for a total of seven miles, as well as improvements to the existing trails. Efforts have focused on reducing the conflict between vehicle traffic and horse use on the roads. Planning efforts are underway to prioritize OHV trail development in Nicolai Mountain. Better coordination between timber harvest activities and new OHV trail development will be a priority in the upcoming sale year.

The district's has continued its law enforcement agreement with the Clatsop County Sheriff's Department. Their accomplishments contributed to safety of the public, identification of individuals illegally dumping trash, individuals abandoning vehicles, and checking vehicles and individuals for compliance with fire season restrictions and requirements.

Surveys for threatened and endangered species continued on the district. No new activity centers were established for northern spotted owls (NSO) during the 2006 survey season. Three established home

ranges were determined to be vacant based on three years of no responses. The district now has five protected NSO home ranges.

Work was completed on the Upper Nehalem Watershed analysis in the spring of 2006. This project was done in conjunction with the Astoria and Forest Grove Districts, and encompasses about 106,709 acres, the bulk of which is within Clatsop County. This project collected needed information at both watershed and site-specific levels and then provided an analysis that information. The findings resulted in only one known Type F stream crossing within the Upper Nehalem Watershed managed by the Astoria District that blocked passage of juvenile fish. Many of the other limiting conditions identified are being addressed within current plans or had been addressed by the time the report was finalized.

As an example of on-going watershed improvement in the Upper Nehalem Watershed, the District installed crossing structures on two fish bearing streams this year using relatively recent advancements in technology. An open bottom slab culvert with a 10-foot span was installed on an unnamed tributary of Rock Creek to replace an undersized, deteriorating culvert which blocked passage to fish. The elevation of the road to the stream was not high enough to meet the fill requirements for a conventional arch culvert. In addition, a two piece modular steel bridge with a 50-foot span was installed on Walker Creek to replace an existing pipe arch culvert was deteriorating and in need of replacement.

Santiam State Forest

The Santiam State Forest is managed by the North Cascade District. Management of the Forest is consistent with the principles and strategies of the Northwest Oregon State Forest Management Plan (NWFMP) that was adopted in 2001. Recreation opportunities are developed and managed under the Santiam State Forest Recreation Management Plan that was adopted in September 2006.

The district spent significant time completing the review of the Harvest and Habitat Model results for the Forest. Alternative 1 of the model predicted a sustainable timber harvest of between 11 and 13 million board feet per year over the next few 5-year periods. It assumes that a Habitat Conservation Plan (HCP) will be approved and that total complex forest structures (Layered and Older Forest) comprise 50% of the forest.

The North Cascade District auctioned 8 timber sales during FY06. Four of these sales were in the FY2006 Annual Operations Plan (AOP). The volume estimated in these totaled 12,189,000 board feet. The remaining four were from previous AOPs that were delayed. The volume from these sales totaled 11,376,000 board feet. The bid-up factor averaged 1.40 for sales sold during the fiscal year. Santiam State Forest timber sales were popular among perspective purchasers. Besides those located in the Santiam Canyon, bidders from Eugene/Springfield, Molalla, Philomath and Willamina participated in auctions.

Agreements were signed with the Oregon Department of Corrections (DOC) and Marion County to use DOC and Marion County Inmate crews for forest management and recreation projects. These crews were utilized for White pine pruning, campground and trail construction, campground maintenance and cleaning-up litter and illegal dump sites. South Fork Crews were used for projects that required specialized skills and training/experience. They were used to plant trees, add the finishing touches to the horse camp and construct bridges and other structures on non-motorized trails and campgrounds.

The Santiam Horse Camp, with 9 campsites, 4 horse corrals at each site, manure bins, fire rings, vault toilets, drinking water and gray-water disposal was opened for use in May 2006. About 7 miles of trail was constructed in the surrounding area including across BLM land. The Rock Creek Campground with 4 dispersed campsites with campfire rings, picnic tables and portable toilets was opened for the 2006 recreation season. Both facilities require users to pay a nightly fee. Two new primitive campsites were developed at the Rhody Lake Campground. One campsite at the lake was relocated. Over 2,000 hours of volunteer labor was used for various projects on the forest. Volunteers donated their expertise and labor to construct horse corrals, design and construct non-motorized multi-use trails and free-ride mountain bike trails. Volunteers also participated in litter cleanup and trail maintenance activities. Recreation staff developed and presented forest education programs to 1,300 students in Marion, Clackamas and Linn counties.

The District continued to use Oregon State Police (OSP) retired troopers for 2,000 hours of forest patrol work through an intergovernmental agreement with OSP, and a Linn County Deputy Sheriff for patrol, and law enforcement on the Forest. They coordinate and cooperate with other local, state and federal law enforcement personnel as well as security personnel for private forest landowners. They enforce laws and state forest regulations, fire restrictions, investigate crimes in an effort to make the Forest a safe and enjoyable experience for the public. They also provide a very valuable service when they provide information and answer questions when they come into contact with the public on the Forest.

Sun Pass State Forest

The Sun Pass State Forest in Klamath-Lake District is comprised of 6,403 acres of Common School Forest Lands and 26,862 acres of Board of Forestry lands. These lands are managed under the Eastern Region Long Range Forest Management Plan, adopted in 1995.

Interpretive and Education Activities

During FY2006 the district issued a 5-year Special Use Permit to the Klamath Outdoor Science School (KOSS) to develop and operate an outdoor science school in Sun Pass State Forest. KOSS intends to provide community outdoor science education that highlights the unique features of the Upper Klamath Basin, serving primarily the youth of the region. KOSS completed the construction of 2-30' diameter yurts to serve as sleeping quarters for the students. They also completed 8 weeks of classes for 4th to 6th grade students. In total, over 500 students, parent chaperones, and teachers attended. Forest Ecology and Management is a required module for all attendees, as is an introduction to the Oregon Department of Forestry and Sun Pass State Forest.

Bull Trout Restoration

The district has begun to work in cooperation with Crater Lake National Park and Rogue River Ranch on Bull Trout restoration in Sun Creek. Crater Lake National Park has been working on protection of federally threatened bull trout in Sun Creek for 14 years. A recovery plan for Bull Trout in the Klamath Basin identified a two phase recovery strategy: phase I—secure headwater populations, and; phase II—expand distribution downstream and provide connectivity between populations to reduce the risk of extinction from a catastrophic event such as fire or flooding, or from genetic isolation. The present bull trout population is resident in nature, living their entire life history in the headwater section within the National Park. A migratory component of the population presumably once occurred, where juvenile bull

trout moved downstream into the Wood River or Agency Lake, grew to a large size, and returned to headwater tributaries to spawn. The Sun Creek bull trout are expanding in number and distribution within the Park because of recent restoration efforts; some will likely be moving downstream onto Sun Pass State Forest land in the near future. At present, bull trout are not likely to persist downstream due to the presence of introduced brook trout and unscreened water diversions for agriculture. Restoration alternatives to be considered for lower Sun Creek will include non-native fish removal, construction of fish barriers capable of preventing upstream migration of non-native fish, stream channel restoration, screening water diversions to prevent fish entrainment, and improving reliability and delivery of water for irrigation.

Elliott State Forest—Coos District

The Coos District includes Coos, Curry and western Douglas Counties on the southern Oregon coast and contains about 87,934 acres of Common School Forest Land, and 9,088 acres of Board of Forestry Lands. The largest block of this land is 93,282 acres in the Elliott State Forest located southeast of Reedsport.

ELLIOTT STATE FOREST MANAGEMENT AND HABITAT CONSERVATION PLANS

Planning for revision of the Elliott State Forest Management Plan (FMP) and the Elliott Habitat Conservation Plan (HCP) continued in FY2006. The planning team consists of a policy steering committee, which includes representation from ODF, Department of State Lands, Department of Justice, Oregon Department of Fish and Wildlife (ODFW), the Coos County Commission, the South Coast Education Service District, and a core team comprised of technical specialists from ODF and ODFW.

The first draft of the revised FMP was completed May 2004, and public input was sought at 3 public meetings in Salem, Roseburg and Coos Bay. The final draft of the FMP was completed by the planning team in September 2005 and made available for public review and comment at public meetings in September 2005. In January and February 2006, the BOF and SLB approved continued development of the HCP consistent with the strategies in the draft FMP.

In January 2005, a cost/benefit analysis comparing state management of the Elliott to sale of the forest to private interests was completed. Direction to conduct the study was included in a budget note from the 2003 Legislature. This analysis is being used as a benchmark for the economic outputs of the revised FMP/HCP.

During FY2006 the planning team continued development of the revised, multi-species HCP for the Elliott State Forest, exclusive of scattered tracts. The HCP strategies are based on the revised FMP, and have been developed to minimize and mitigate the effects of the authorized incidental take associated with forest management. The revised Elliott HCP is intended to include the northern spotted owl, marbled murrelet, and bald eagle. Other species at risk for listing that are known to inhabit the Elliott State Forest, and for which there is suitable scientific knowledge, are also being considered for inclusion in the revised Elliott HCP.

Considerable progress was made in 2005 and 2006 regarding HCP negotiations with the federal agencies (United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS)), with substantial agreement on HCP strategies being reached in May. In general, there is agreement at the negotiating team level that we can move forward with the strategies in the draft HCP. In late June 2006, a draft HCP was delivered to the contractor working with the planning team to develop the draft Environmental Impact Statement (DEIS).

The anticipated date for the federal decision on Incidental Take Permit (ITP) issuance is fall 2007, after completion of the National Environmental Policy Act (NEPA) process. The current timeline for requesting SLB and BOF approval of the revised FMP and HCP is late 2007, after the federal decision.

ENVIRONMENTAL ANALYSIS (NEPA PROCESS)

Obtaining an ITP requires participation in the NEPA process. This includes public scoping, developing a DEIS, public review, a final EIS and obtaining a favorable Record of Decision. Negotiations with the federal services on the new HCP are also a part of this process. A contractor (Jones & Stokes) was hired in late 2004 to write the EIS and help the agencies through the NEPA process. The contractor, a large environmental consulting company, has previous experience with the NEPA process through forest HCPs as well as other types of projects requiring environmental analysis.

Scoping meetings were held on May 24–26, 2005 at Roseburg, Coos Bay and Salem. This was essentially the first step in the NEPA process and helped identify the alternatives that are being analyzed in the DEIS. The contractor received a draft HCP in June 2006, and has begun to develop the DEIS. This DEIS is scheduled to go out for public review in January 2007, along with the draft HCP. The final EIS is expected to be available in mid-2007.

IMPLEMENTING AGREEMENT

A final piece of the process will be developing an implementing agreement between the State and the federal agencies. The Department of Justice will work with the planning team and federal solicitors to complete this agreement before the ITP is issued.

IMPLEMENTATION PLAN

The district has developed an initial draft of the 10-year Implementation Plan (IP) for the revised FMP/HCP. This draft was made available along with drafts of the proposed FMP and HCP at public meetings held in September 2005 at North Bend and Roseburg.

FOREST MODELING

The proposed landscape strategy has been modeled to help determine how well the strategies will achieve the goals for the forest. Inventory data being used in the model is good quality, with much of the existing data collected during the last five years. In addition to the draft Integrated Landscape Strategy, other management scenarios have been modeled. These scenarios range from an emphasis on conservation to an emphasis on timber production. Outputs for all models are being used in the impact analysis in the EIS.

PUBLIC INVOLVEMENT

Public involvement activities associated with the FMP and HCP planning process continued in 2005/2006. In September 2005 public meetings were held in North Bend and Roseburg to obtain comments on the final draft of the FMP. At these meetings, the final draft FMP, draft HCP, and draft Implementation Plan (IP), were made available to the public. Several viewpoints were represented in the comments at these meetings ranging from producing more revenue for the Common School Fund to providing more protection for other forest resources such as owls, murrelets and streams. All comments were reviewed by the planning team and responses were provided to those who attended the meetings and posted on ODF's website. The draft HCP and DEIS will be made available for public input in January 2007. This public input process is part of federal NEPA requirements.

COORDINATION WITH FEDERAL SERVICES

The US Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries have been involved at various points throughout the process. Biologists from the Services have been in regular attendance at the Core Team meetings to provide input from their perspective and to maintain a connection with the planning process. A good working relationship exists among the Core Team and federal biologists. HCP negotiation meetings with the federal services began in September 2004 and substantial agreement on strategies was reached in May 2006. Additional meetings and discussions will take place during the last half of 2006.

OTHER ELLIOTT STATE FOREST ACTIVITIES DURING FY2006

1. Marbled Murrelet Protocol Surveys

In 2005, 306 surveys were completed at 174 stations representing 37 survey sites on the Elliott State Forest. These 37 sites represented 11 planned timber sales. Detections were recorded during 61 surveys at 23 different sites with three surveys recording sub-canopy behavior. Of the surveys with significant, sub-canopy detections, all were associated with protocol surveys of three planned sales.

Summarizing the protocol sale surveys, a total of 78 acres were mapped as occupied with one new Marbled Murrelet Management Area (MMMA) designated (Larson Bottom) totaling 78 acres. Of these total acres, 44 were previously classified as conservancy areas for other purposes. Four sale units were released for sale preparation after no significant detections were observed in protocol surveys. The 2006 surveys began in May and ended August 5.

2. Oregon Plan for Salmon and Watersheds

The following activities were accomplished during the 2006 fiscal year under the Oregon Plan for Salmon and Watersheds:

- There were 7 sales completed during the reporting period where additional trees were retained along stream buffers under ODF Harvest Measure 62 for the Oregon Plan.
- The Coos District cooperated with the Coos Watershed Association to complete 2 large in-stream wood placement projects in Elk Creek and in the West Fork Millicoma River. On Elk Creek phase I of a fish passage improvement project at a bedrock cascade was completed and phase II will take place in the summer of 2006. In addition a large conifer tree was placed into Marlow Creek for habitat improvement after falling across a mainline forest road.
- A large culvert on a tributary of Elk Creek and a culvert on Bickford Creek were replaced to improve fish passage.
- Coos District continues to have voting board members on the Coos Watershed Association and the Tenmile Lakes Basin Partnership.

Board of Forestry Acres

Table 16: Acres Summary	
COUNTY	STATE FOREST
BENTON	8,194
CLACKAMAS	7,265
CLATSOP	146,963
COLUMBIA	6,458
COOS	7,219
DOUGLAS	8,625
JOSEPHINE	2,482
KLAMATH	26,912
LANE	24,734
LINCOLN	15,487
LINN	21,352
MARION	18,329
POLK	6,122
TILLAMOOK	310,624
WASHINGTON	46,885
Grand Total	657,657

Forest Trust Land Advisory Committee

Year-End Summary

In 1987, the Oregon Legislature established the Forest Trust Land Advisory Committee (FTLAC). During FY2006, the FTLAC held meetings in August of 2005, and January, March, and June of 2006. The April 2006 FTLAC meeting was cancelled and replaced with a CFTLC meeting. Following are brief summaries of the issues discussed at each FTLAC meeting.

August 2005—An update of the department’s biennial budget was distributed, including information regarding approval of all state forests positions as limited duration instead of permanent; a notation that positions could be made permanent if the agency could sustain harvest levels of 250 mmbf or more; a budget note that directs the agency to report to the Emergency Board every six months on the ongoing outputs of the Harvest & Habitat (H&H) Model Project; reductions in operating costs and positions for the Tillamook Forest Center (because State Parks was providing the positions); and reductions in expenditure limitation for the Common School Funds account. FTLAC members were informed about the BOF issues scan, and John Griffith provided an update on fund distribution from the New Carissa insurance settlement. Lisa DeBruyckere distributed a draft request for proposal to seek assistance with improving revenue projection methodology. H&H project staff provided an update on current model runs. Mark Rasmussen with Mason, Bruce, and Girard (MBG) shared an analysis of complex structure targets. The FTLAC asked the department to consider deviations from even-flow harvest/revenue projections, and provide 20% and 30% complex structure target runs.

January 2006—The department shared two legislative concepts relative to the appropriate level of reserve in the forest development fund, and if exceeded, the process for excess funds to be transferred to the counties; and a revision of SB1077 to clarify the relationship between the state and the counties. FTLAC received an update on the January 4, 2006 BOF meeting that included a H&H model project briefing, updates and findings relative to Swiss Needle Cast, Elliott State Forest Habitat Conservation Plan negotiations, and Systematic Evidence Review. Steve Thomas distributed the 2006 FTLAC work plan. Lisa DeBruyckere provided information regarding strategies used in setting harvest levels and developing annual operations plans, and information relative to development of performance measures. The FTLAC reviewed BOF intent statements and were given an opportunity to provide comments. Lisa DeBruyckere shared the request for proposal to conduct a 2nd party assessment of the forest management plans, provided an update on the revenue projection project, and noted that Responsive Management had been hired to conduct a statewide public opinion survey on state forestlands. The H&H project team provided an update. FTLAC decided to cancel their April meeting and replace it with a CFTLC meeting to review the final results of the H&H model project. Staff and Mark Rasmussen from MBG discussed volume flow analysis. The grand opening of the Tillamook Forest Center was announced. There was discussion about pulp markets.

March 17, 2006—FTLAC held a caucus to complete an ODF customer service performance measure survey. Mark Rasmussen with MBG presented information relative to a 2003 mill study. H&H project staff provided an updated on the H&H final report.

June 2, 2006—Lisa DeBruyckere distributed information relative to windthrow, stand level inventory, a summary of public comments from the April 27, 2006 Board meeting, a greatest permanent value matrix, a chart for the Elliott State Forest that describes the full growth potential of the forest, information on the peer review of the H&H project (the FTLAC was asked for feedback regarding any aspects of the project they wanted to review), a big log project summary, and a recent reorganization of the State Forests Program that created an adaptive management unit and converted two limited duration positions to permanent. Jeff Brandt discussed the research and monitoring program and the collaboration that exists with other agencies. Barbara Lee provided background information on the Western Oregon Habitat Conservation Plan. The 2006 BOF work plan was discussed, and Nancy Hirsch gave an update on the biennial budget and program option package for the 2007–09 biennium.

The following individuals were elected as officers and Board members of CFILC, thus became the members of the FTLAC for calendar year 2006.

1. Chair Tim Josi (Tillamook County)
2. Vice-Chair Sam Patrick (Clatsop County)
3. Chuck Hurliman (Tillamook County)
4. Richard Lee (Clatsop County)
5. Tony Hyde (Columbia County)
6. Mike Propes (Polk County)
7. John Griffith (Coos County)

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