



# Common School Forest Lands Annual Report

FISCAL YEAR 2010





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**Prepared for the  
Oregon Department State Lands  
by the  
Oregon Department of Forestry**

DATE: October 12, 2010

TO: Governor Ted Kulongoski  
Secretary of State Kate Brown  
State Treasurer Ted Wheeler

FROM: Marvin D. Brown, State Forester

SUBJECT: Fiscal Year 2010 Report on the Status of Common School Forest Land Management

The Oregon Department of Forestry (ODF) manages the Common School Forest Lands (CSFL) under a 2005 agreement with the State Land Board (SLB) and the Department of State Lands (DSL). As trustee for the CSFL, the primary obligation of the SLB is to manage lands with the object of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management. The Department of State Lands Asset Management Plan calls for these lands to be managed to provide a sustained, even flow of timber harvest.

ODF actively manages these lands for sustainable timber harvest and resource protection by implementing goal-driven strategies contained in broad forest management plans approved by both the Board of Forestry (BOF) and the SLB. Revenues generated from CSFL are dedicated to the state's Common School Fund (CSF).

The agreement between ODF, DSL and the SLB requires ODF to report annually in writing the status of CSFL management. The status report includes information about timber management (volume and value of harvested, sold and planned timber sales), actual fiscal year operating costs, revenue transferred to the CSF, reforestation and intensive management accomplishments and costs, research and monitoring results, contract modifications, and any other information affecting the management of CSFL.

During Fiscal Year (FY) 2010 the national economy continued in recession and timber prices remained very low. This underlying national situation significantly affects the forest management activities on CSFL, including revenues generated. In FY 2010, \$9.6 million was transferred to the CSF, below the \$11 million average of the last five years.

During FY 2010, the following issues were encountered:

- Due to the national economy, low market prices and activity (log prices, timing, and trends in harvest) continued to impact harvest volume and value. Market conditions somewhat improved during the spring of 2010, and average stumpage prices for new sales reflected that improvement. On CSFL, average stumpage prices for new sales increased from \$232 per thousand board feet (mbf) in FY 2009 to \$330 per mbf in FY 2010, representing a 42 percent increase. However, the outlook has again darkened as U.S. economic growth has again slowed, with housing recovery slower than previously forecasted and lower log prices in the immediate future are expected.

- Under the current 1995 Elliott State Forest Management Plan, approximately one-half of the Elliott State Forest is constrained by long rotation basins during the first three decades. The remaining areas of the forest have been impacted by more marbled murrelets than expected when the 1995 plan was adopted. Additional marbled murrelet management areas are created each year, as well as acres added to current area, and this reduces the area in which sales can be planned.
- Some of the recent timber sales have been in younger stands (thus yielding less volume per acre).

These issues are ongoing challenges as ODF manages these lands to meet the objectives of both the ODF/SLB/DSL agreement and the Asset Management Plan.

Approval of the new Elliott State Forest Management Plan and the new Habitat Conservation Plan currently under development would alleviate some of these issues, while still utilizing a habitat conservation plan for compliance with the Endangered Species Act. At this time, the National Marine Fisheries Service and ODF have differences of opinion on the effects of the proposed aquatic/riparian management strategies. At the direction of the SLB, ODF is continuing to work with the federal services and the DSL to resolve these issues. An independent scientific review of these strategies is scheduled for completion in October, 2010 and may help all parties decide on a course for future action. Following that review, either a new habitat conservation plan will be adopted or the previous plan will be terminated.

Concurrent with the above work, a revised forest management plan that uses take avoidance for compliance with the endangered species act is being developed. If the revised Habitat Conservation Plan is not approved, the revised forest management plan will be ready for implementation.

Highlights from FY 2010 include the following:

1. 24.8 MMBF of timber volume was removed from CSFL, of which 16 MMBF came from the Elliott State Forest. This is a 4.5 MMBF (15 percent) decrease from FY 2009.
2. \$9.6 million was transferred to the CSF. This is a decrease of \$4 million from FY 2009. The past five-year average was \$11.1 million. Of this \$9.6 million, the Elliott State Forest produced \$7.7 million, or 80 percent, of the total.
3. Net Operating Income (NOI) for FY 2010, calculated as total revenue transfers to the CSF less ODF management costs, was \$5.8 million. This is a decrease of \$2.9 million from FY 2009 (33 percent). NOI has ranged from a low of \$4.4 million in 2006 to a high of over \$20 million in 2000, and is influenced by the same factors that affect volume and value, as well as management costs. Management costs in FY 2010 totaled \$3.9 million. This is a decrease in costs of \$1 million from FY 2009.
4. Twelve timber sales containing CSFL were sold in FY 2010, for a total estimated volume of 45.5 MMBF and an estimated value of \$15 million. Timber sale preparation has been completed on the remainder of the FY 2010 sale plan and these sales will be offered in FY 2011.
5. During the 2009-11 biennial budget process, ODF once again requested a policy option package to correctly allocate administrative costs between agency programs. Again this adjustment was not approved by the legislature. During FY 2010, funds from Board of Forestry-managed lands will again cover administrative costs above the CSF's prorated share, resulting in the CSF funding the appropriate share of agency administration.

6. Other specific management activities on the Elliott State Forest for FY 2010 included:

- **Completion of the 2009 Marbled Murrelet Protocol Surveys.** In the survey season, 734 surveys were completed at 492 stations, representing 81 survey sites on the Elliott State Forest. Five new Marbled Murrelet Management Areas were designated totaling 106 acres. One existing Marbled Murrelet Management Area was expanded by 19 acres.
- **Intensive management practices.** Management practices were applied to 3,191 acres of CSFL during FY 2010. These practices included tree planting, tree protection, vegetation control, noxious weed management and pre-commercial thinning. The total cost for these intensive management practices in FY 2010 was \$288,933.

Following is the Report to the Department of State Lands and State Land Board on the Status of Common School Forest Lands Management – July 1, 2009 through June 30, 2010.

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*Photo: Oregon Department of Forestry*

**Log placement in Cougar Creek**



*Photo: Oregon Department of Forestry*

**Spawning gravel retained in Cougar Creek—Elliott State Forest**



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# Introduction



The Oregon Department of Forestry (ODF) manages the Common School Forest Lands (CSFL) under the 2005 CSFL Management Agreement with the State Land Board (SLB) and the Department of State Lands (DSL). CSFL are trust lands that were granted by the United States to the State of Oregon upon admission to the union to finance public schools.

The Oregon Constitution, Article VIII, Section 5 (2); outlines the State Land Board's powers and duties for managing CSFL as, "The board shall manage lands under its jurisdiction with the object of obtaining the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management." Revenues from these lands are dedicated to the State's Common School Fund (CSF).

DSL's Asset Management Plan (adopted October 2006) provides the strategic direction for CSFL. The primary strategy for forest land in the plan is to "Manage forest lands to increase timber harvest levels to the extent possible, while maintaining a sustainable, even-flow harvest of timber, subject to economic, environmental and regulatory considerations." ODF staff coordinates with DSL on an ongoing basis to assure alignment with the Asset Management Plan.

The CSFL Management Agreement (June 2005) outlines the primary objectives for management as:

1. Maximizing the return to the CSF when forest lands are sold or exchanged, timber is harvested and sold, or from any sale of product or services from CSFL;
2. Managing the CSFL primarily to produce a sustainable, even-flow harvest of timber subject to economic, environmental, and regulatory considerations in accordance with specific forest management plans;
3. Maintaining forest management costs at a level comparable to similar lands managed by public and private entities; and
4. Investing in improvements to CSFL (e.g. timber stand inventory



and environmental inventory, long-range planning, road construction to improve access, pruning, fertilizing, pre-commercial thinning) when it is justified through investment and return analysis.

ODF manages a total of 120,924 acres of CSFL (Appendix A) under the agreement with the SLB and the DSL. These lands are located in several state forests throughout western Oregon and in Klamath County, with the largest block being on the Elliott State Forest in Coos and Douglas counties. This report highlights key management activities and issues during Fiscal Year (FY) 2010. Other information in this report discusses volume and estimated value of active and planned timber sales, reforestation and intensive management accomplishments and costs, estimated and actual fiscal year operating costs, sold sale revenues, contract modifications, timber sale planning, and other information affecting the management of CSFL.



*Photo: Oregon Department of Forestry*

**Overlooking the Elliott State Forest**



# *Section 1. Common School Forest Lands*



## Financial and Asset Management

### **Overview**

This report is intended to focus on FY 2010 (July 1, 2009 through June 30, 2010). However, in the business of forest management, particularly with the Elliott State Forest, it is important to look at the trend in revenues and costs over the past few biennia (i.e., sales approved in one year's operating plan may be harvested over one to three subsequent years). Revenue transferred to the CSF from management of CSFL has varied over the past 10 years from \$8.5 to \$19.1 million on an annual basis.

The primary factors influencing revenue and revenue fluctuations include: housing starts, lumber prices, harvest timing, individual sale volumes and value, changing ratios between harvests on CSFL and Board of Forestry lands (BOFL), and uncertainty from marbled murrelet detections.

### **State Land Board Performance Measures**

Performance Measures and targets provide a means of measuring progress towards meeting established goals. DSL established performance measures and targets in the Asset Management Plan approved by the SLB in 2006. These Asset Management Plan measures and targets have been established to evaluate management actions, inform decision-making on land reclassifications, and guide decisions on investment, retention and disposal of lands. The SLB has established four separate measures it will use to assess



performance of the CSFL.

### **Return on Asset Value**

ODF has not calculated a Return on Asset Value for CSFL for FY 2010. The systems to accurately report this for CSFL are still under development.

### **Net Operating Income**

Net Operating Income for CSFL for FY 2010 was \$5.8 million. This is a decrease from \$8.7 million in FY 2009 and an increase from \$5.0 million in FY 2008. Costs in FY 2010 were lower by \$1 million than in FY 2009.

### **Annual Revenue**

Annual revenue is reported in Table 1 and many sections of this report address the underlying factors that influence this indicator of financial performance.

### **Land Value Appreciation**

ODF has not calculated Land Value Appreciation for FY 2010.

Harvest levels are the single biggest factor influenced by management decisions. In turn, volume sold for harvest directly impacts revenue and net operating income.

The 1995 Elliott State Forest Management Plan (Elliott State Forest FMP) and accompanying Habitat Conservation Plan (Elliott State Forest HCP) provided an Incidental Take Permit (ITP) for northern spotted owls and marbled murrelets, both listed species under the Endangered Species Act. The Elliott State Forest HCP gave certainty around harvest levels, although the harvest levels are comparatively low in relationship to total growth and what other non-public land managers chose to do on similar forest land. The 1995 Elliott State Forest HCP eliminated the need for annual northern spotted owl and marbled murrelet surveys of proposed sale areas, thus reducing costs and providing more certainty. The marbled murrelet ITP expired in 2001 and surveys for marbled murrelets (a take avoidance strategy) resumed in 1998.

In order to improve annual revenue and net operating income, a new draft forest management plan was completed in in September of 2005. An accompanying multi-species draft Elliott State Forest HCP was completed in FY 2007. These new plans reflect an increase in volume and revenue from the Elliott State Forest, while protecting marbled murrelets, northern spotted owls, coho salmon, and other native fish and wildlife species pursuant to the Endangered Species



Act. During FY 2009, the draft Elliott State Forest Environmental Impact Statement (EIS) and HCP went out for public review for three months in the fall of 2008. A significant number of comments were received—primarily from non-governmental organizations. Comments were also submitted by public agencies, the timber industry, and private individuals.

In early 2009, negotiations on the draft Elliott State Forest HCP strategies resumed with the federal services in light of the public comments. U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) identified a number of substantive issues from the public comments that they believed would require changes to the draft Elliott State Forest HCP. During 2009, ODF negotiated with the federal services on those issues and reached agreement on the most significant issues with the USFWS, but not with NMFS.

ODF will continue to negotiate with NMFS for resolution to the draft Elliott State Forest HCP and plans to determine whether to continue pursuit of this HCP by the end of 2010. If agreement is not reached, the 1995 Elliott State Forest HCP will be terminated and a take avoidance strategy will be implemented to comply with the Endangered Species Act. The Elliott State Forest FMP is being revised using take avoidance for compliance with the Endangered Species Act.



Photo: Oregon Department of Forestry

**The State Land Board tours the Elliott State Forest**

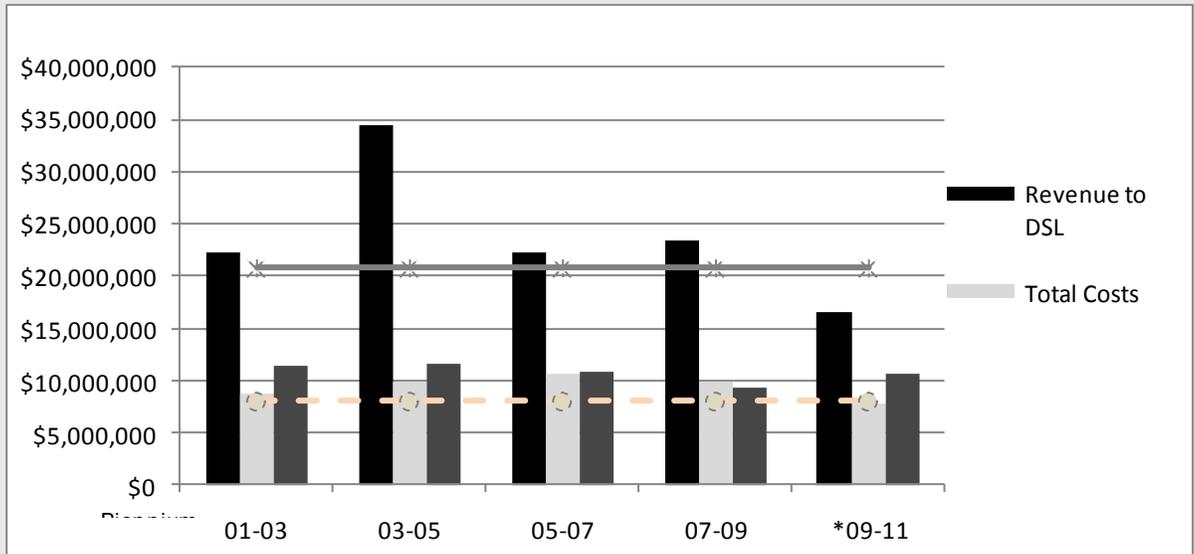
## **Biennial Context**

For the past four biennia (2001-03 to 2007-09), the average revenue transferred to the DSL has been approximately \$25.6 million per biennium (Figure 1). During the same four biennia, the average costs have been \$9.8 million per biennium. This results in a net operating



income average of about \$7.9 million per year for the last eight years. During the 2007-09 biennium, the total revenue transfer was \$23.4 million. The total costs for the biennium were \$9.7 million, resulting in an average net operating income of \$6.85.

**Figure 1. Biennial Revenues to Costs for Common School Forest Land Management and Biennial Budget Totals 2001-2003 through 2009-2011 (Projected) Biennia**



Revenue is the amount transferred to DSL. Total Costs are expenditures and transfers. Budget includes prorated amounts.

\*09-11 includes actual dollars from FY 2010 and projected dollars from FY 2011.

The July 2010 revenue projection reflects a further decline for the 2009-2011 biennium to \$16.6 million, then a rebound to \$30.3 million plus in the 2011-2013 biennium and beyond. It is important to point out that these forecasts assume that Elliott State Forest harvest levels will stabilize at a minimum of 35 million board feet (MMBF) in FY 2012 and beyond with either an ITP or take avoidance.

### Fiscal Year 2010 Revenue

During FY 2010, \$9,646,062 in revenue was transferred to DSL (Table 1). This is lower than both the five-year average of \$11.1 million and the 10-year average of \$12.9 million. Details of the specific sales that produced the revenue for FY 2010 and market



**Table 1: Revenue and Costs from Common School Forest Lands  
Fiscal Years 2001 through 2010**

<b>Actual Revenue Transfer to DSL</b>		<b>Fund 52 Expenditures</b>					<b>Transfers Out</b>	<b>Total Costs</b>
<b>Fiscal Year</b>	<b>Timber Sales and Forest Product Sales Revenue<sup>1</sup></b>	<b>Personal Services</b>	<b>Services and Supplies</b>	<b>Capital Outlay</b>	<b>Special Payments and Other Expenditures</b>	<b>Total Expenditures<sup>2</sup></b>	<b>Administrative Prorate, Capital Improvement, COPs, Seed Orchard, etc</b>	<b>Fund 52 Expenditures and Revenue Transfers</b>
<b>Elliott State Forest 2010</b>	\$7,664,940	\$1,351,012	\$636,714	\$4,407	\$0	\$1,992,133	\$268,458	\$2,260,591
<b>Other Sources 2010</b>	\$1,981,122	\$856,701	\$639,432	\$0	\$0	\$1,496,133	\$99,845	\$1,595,978
<b>2010 Totals</b>	\$9,646,062	\$2,207,713	\$1,276,146	\$4,407	\$0	\$3,488,266	\$386,303	\$3,856,569
<b>Elliott State Forest 2009</b>	\$9,131,806	\$1,298,401	\$833,825	\$19,081	\$0	\$2,151,307	\$559,102	\$2,710,409
<b>Other Sources 2009</b>	\$4,437,281	\$1,123,759	\$840,274	\$0	\$0	\$1,964,033	\$217,429	\$2,181,462
<b>2009 Totals</b>	\$13,569,087	\$2,422,160	\$1,674,099	\$19,081	\$0	\$4,115,340	\$776,531	\$4,891,871
<b>2008</b>	\$9,841,438	\$2,335,231	\$1,692,094	\$14,327	\$0	\$4,041,652	\$804,938	\$4,846,590
<b>2007</b>	\$12,590,076	\$2,473,445	\$2,007,265	(\$1,280)	(\$54)	\$4,479,376	\$947,815	\$5,427,192
<b>2006</b>	\$9,656,593	\$2,414,501	\$1,861,269	\$13,433	\$0	\$4,289,203	\$936,936	\$5,226,140
<b>2005</b>	\$19,092,180	\$2,344,566	\$1,687,799	\$16,833	\$34,193	\$4,083,391	\$1,037,909	\$5,121,300
<b>2004</b>	\$15,360,073	2,143,416	\$1,506,424	\$138,230	\$30,802	\$3,818,872	\$881,152	\$4,700,024
<b>2003</b>	\$8,550,000	2,142,745	\$1,567,088	\$2,471	\$50,167	\$3,762,471	\$660,865	\$4,423,336
<b>2002</b>	\$13,671,493	\$1,977,222	\$1,386,074	\$23,642	\$68,574	\$3,455,512	\$806,418	\$4,261,930
<b>2001</b>	\$16,787,101	\$1,986,033	\$1,243,061	\$12,629	\$171,314	\$3,413,037	\$740,159	\$4,153,196

<sup>1</sup>Includes revenue from negotiated sales, rights-of-way, permits, etc., in addition to timber sales. Revenue for the Elliott State Forest are payments from Coos and Douglas Counties.

<sup>2</sup>Coos District expenditures reflect Elliott State Forest expenditures



conditions follow in the report.

## Fiscal Year 2010 Investment Costs

Charges for managing the CSFL totaled \$3.9 million during FY 2010, (Table 1). During FY 2010, \$3.5 million of \$3.9 million in costs were related directly to operational budget units that manage CSFL. The budget units include State Forests personnel in Salem, three regional areas and nine districts. The responsibilities of these units include timber sale contract development and compliance, reforestation and intensive management activities; ESA compliance, research and monitoring, forest planning, and overall program management.

Other charges to the CSF referred to as “Transfers Out,” were \$386,303 in FY 2010 (Table 2). This is approximately 10 percent of the overall costs. The transfers out charges include: a portion of overall agency administration; capital improvement projects; debt service on capital investments through the use of certificate of participations (COPs); and seed orchard management.

It is ODF’s goal to ensure that allocation of agency administrative costs accurately reflects the work performed by administrative and managerial staff, and that each program pays their appropriate share of administrative costs. The administrative funds support the following services:

**Table 2. Details of Revenue Transfers  
Fiscal Year 2010**

Revenue Transfers	Amount
Administrative Prorate Charge	\$454,722
Administrative Prorate—Credit from FY 2009	(\$167,282)
COP Interest (Reimbursement)	\$23,486
COP Principle (Reimbursement)	\$53,205
J.E. Schroeder Seed Orchard Transfer	\$22,172
Capital Improvement	\$0
Other	\$0
<b>FY 2010 Total:</b>	<b>\$386,303</b>



- Human Resources (Personnel, Labor Relations, Safety, and Training);
- Financial Services (accounting and reporting services);
- Internal Auditing, Quality Control, and Risk Management;
- Information Technology support and infrastructure to ODF staff and field offices;
- Oversight and management of Facilities, Property Control, and Procurement activities (contracting and physical assets);
- Payroll administration;
- Biennial Budget development and implementation;
- Agency Affairs (public information, education, and legislative coordination);
- Resource analysis and technical studies; and,
- Executive-level policy and administrative oversight (State Land Board, Board of Forestry (BOF), Executive Team and Administrative Services Program Directors).

The appropriate administrative cost distribution is calculated from work studies performed each biennium by ODF. The work studies in the different administrative areas represent the percentage of time a specific service area (e.g., Human Resources) performs work for the benefit of an operating program (e.g., management of CSFL). Charges for Fiscal Year 2010 are based on the 2009-2011 biennial work study.

Seed orchard costs for FY 2010 were \$22,172. This money was used to produce genetically improved seed (superior growth, wood quality, and disease tolerance characteristics as identified through traditional breeding and selection methods) appropriate for state forestlands.

The certificate of participation (COP) interest and principal is used to fund capital construction debt service for facility development and improvement to the Salem compound.

The ODF Fire Protection Division billed DSL \$295,280 for fire patrol assessment. This cost is not included in Tables 1 and 2 as a land management expenditure or revenue transfer.

## **Financial Administration and Reporting**

The current 2005 Common School Forest Land Management Agreement and 2010 sub-agreement between ODF and DSL provide operational and administrative guidance for the management of CSFL to ensure fiscal accountability and appropriate exchange of



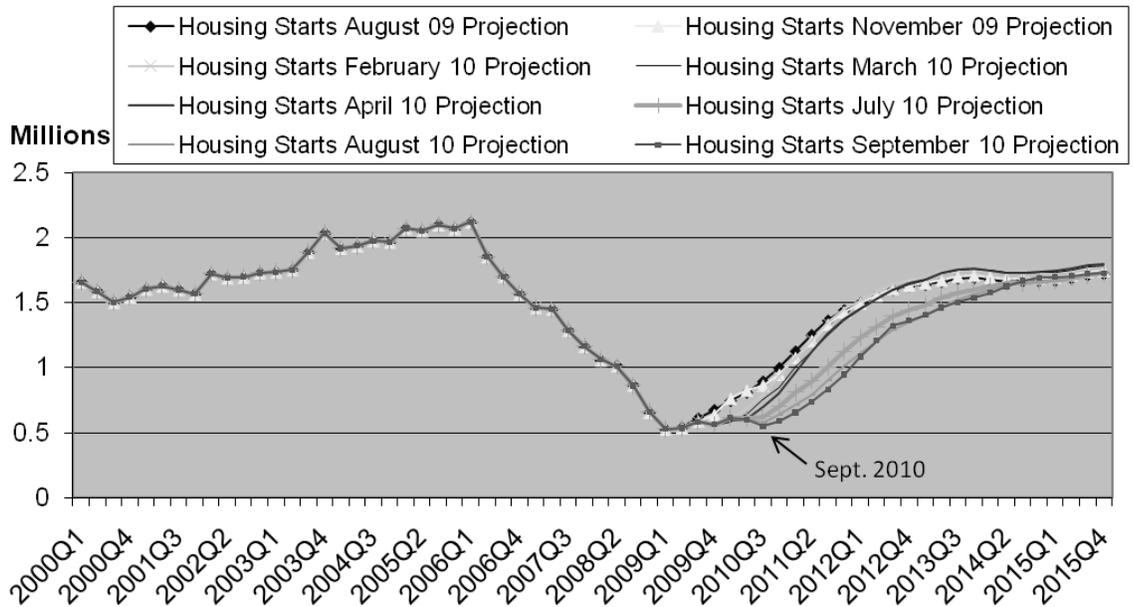
information between sister agencies. DSL and ODF have continued to work closely during the past several years to improve communication and understanding of fiscal reports and budgeting. Ongoing meetings have been held to discuss fiscal and biennial budget development, how ODF gathers and reports financial data, annual operations plans, and other fiscal-related matters. ODF has implemented a new procedure that includes a memo outlining the monthly revenue and costs associated with CSFL management.

## Long-Term Market Trends

*The projection of the long-term market trends is based on data from IHS Global Insight Inc., Random Lengths, and interviews of analysts knowledgeable about Oregon's forest products industry.*

The primary product marketed by ODF from CSFL is sawmill grade logs. These logs from State Forests are processed predominantly into dimension lumber and plywood for the housing market. Accordingly, the Department's market trends are largely influenced by the amount of new home construction and home remodeling, the level of non-

**Figure 2: Historical and Projected U.S. Housing Starts 2000-2015**



housing construction, mortgage interest rates, and competition from alternative suppliers of logs and saw-timber. Collapsing house prices and construction and a deep recession have soured markets for primary forest products and, consequently, timber marketed by ODF. Market conditions improved in the spring of 2010, but the outlook has again darkened as U.S. economic growth slowed and expectations are that housing recovery will be slower than previously forecasted, and log prices likely weaker.

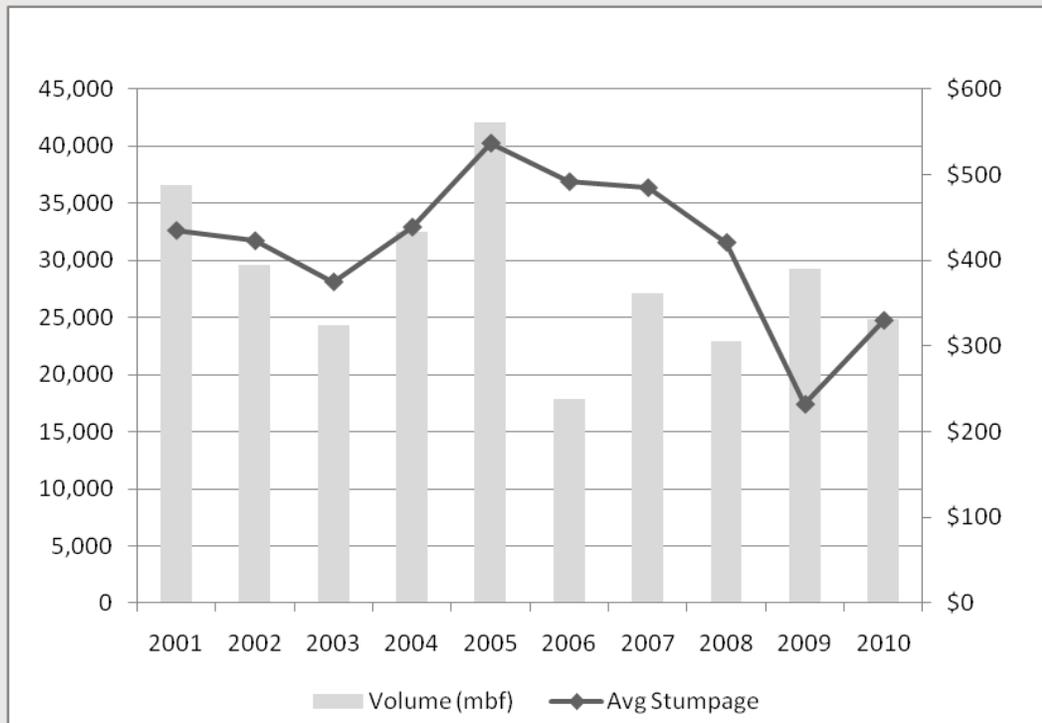
Following the greatest economic downturn since the Great Depression, a recovery in U.S. economic growth, housing starts, and wood products markets was projected in 2010. The recovery has been subdued by historical standards. According to the most recent IHS Global Insight forecast, “The economy has lost momentum. Growth should downshift to around 2.5% in the second half of the year. GDP growth averages 3.1% in 2010, but slows to 2.7% in 2011.” In spite of record low mortgage rates, currently averaging about 4.5 percent for 30-year fixed-rate mortgages, the outlook for housing has soured. Global Insight sharply reduced their 2011 housing starts forecast from 1.16 million to .96 million units and has delayed the expected recovery to historical levels to 2013. Some analysts consider Global Insight to be overly optimistic. Figure 2 shows the deterioration of the housing start outlook since August 2009.

The Oregon Timber Harvest Reports show that that all ODF-managed forests harvest levels declined approximately 16 percent in 2009 from 2008 levels—from 278,069 MBF to 234,520 MBF. However, as shown in Table 3, the average stumpage price on CSFL has increased from FY 2009 to FY 2010, rising from \$232 to \$330.per MBF—an overall increase of 30 percent.. Table 3 and Figure 3 display historical value, volume, and average stumpage price for Fiscal Years 2001 through 2010.

Purchasers of timber sales from the Elliott State Forest are from the Coos Bay, Bandon, Roseburg, Riddle, and Eugene-Springfield areas. These companies generally market the logs throughout southwest Oregon and the Willamette Valley to mills and markets that face the trends of the national economy and the wood products industry. Demand for logs and stumpage harvested from Oregon’s forests are highly correlated with national housing starts and will not significantly improve until there is a turnaround in housing start levels. When the current economic downturn eases, excesses in the housing market will be worked off and housing-related industries should begin to recover, albeit slowly. The collapse in housing starts and prices should begin cutting into over laden housing inventories,



**Figure 3. Volume Removed and Stumpage Prices from Common School Forest Lands Harvests, Fiscal Years 2001–2010**



but this will take time. In the long term, effects of the recent recession are expected to ease but mortgage rates are expected to increase. Housing starts have fallen from 2 million several years ago to .554 million in 2009 and are slowly beginning to rebound.

As shown in Figure 4, housing starts are now forecasted to have hit bottom in the 2<sup>nd</sup> quarter of 2009 at a historically low level of .54 million annual starts. These levels are expected to increase in 2010 to .59 million starts and gradually increase thereafter, reaching 1.48 units in 2013. Housing starts are expected to return to the 1.6-1.7 million level, sustainable based on personal income and demographics, by 2014. Demand for lumber and wood products has been held back by falling levels of nonresidential construction, which will continue to decline even as a recovery in housing starts begins (Figure 4).

The long-term outlook for single-family housing is good. Lower house prices and record low mortgage rates mean much better affordability. With housing starts much lower than would be expected



**Table 3. Common School Forest Lands Historical Timber Harvest Value, Volume, and Average Stumpage Price Fiscal Years 2001 through 2010**

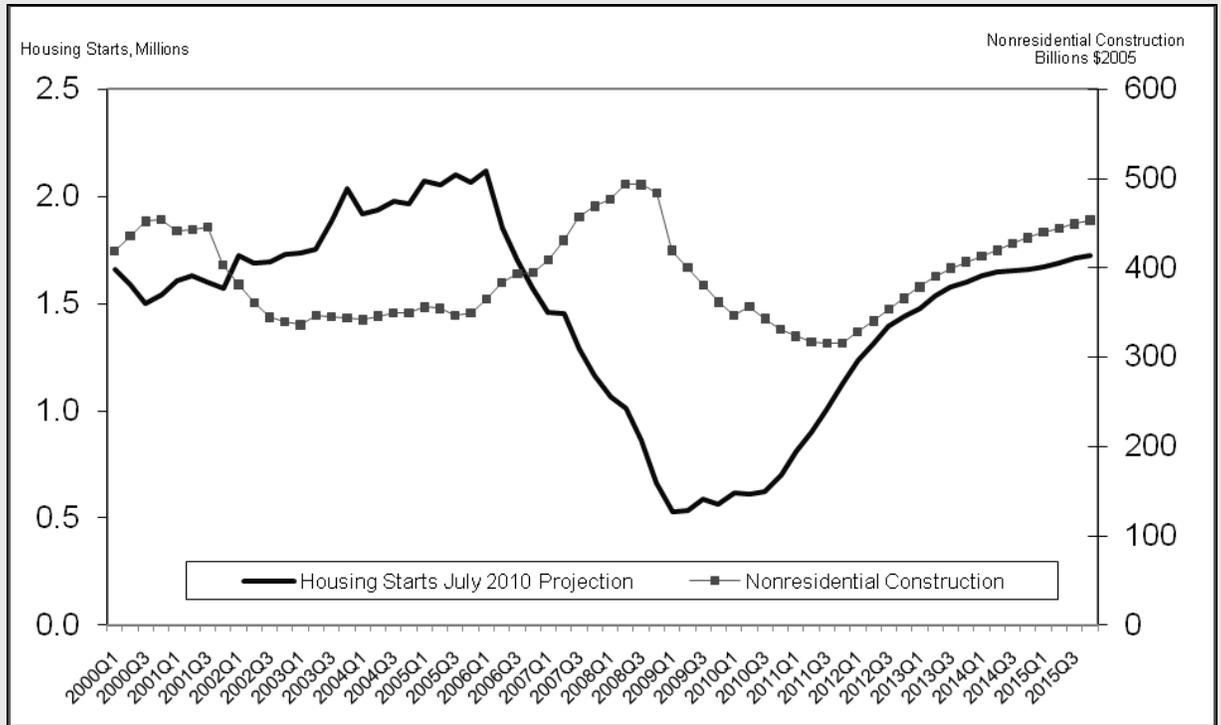
<b>Fiscal Year</b>	<b>Timber Sales Value of Timber Removed*</b>	<b>Timber Harvest Volume (MBF) Removed</b>	<b>Average Stumpage Price**</b>
2010 Elliott State Forest	\$6,394,984	16,045	\$340
2010 Other CSFL	\$1,827,014	8,767	\$185
<b>Total 2010</b>	<b>\$8,221,998</b>	<b>24,812</b>	<b>\$330</b>
2009 Elliott State Forest	\$8,676,962	18,742	\$258
2009 Other CSFL	\$3,742,821	10,545	\$203
<b>Total 2009</b>	<b>\$12,419,783</b>	<b>29,287</b>	<b>\$232</b>
<b>2008</b>	<b>\$11,988,895</b>	<b>22,974</b>	<b>\$421</b>
<b>2007</b>	<b>\$12,760,992</b>	<b>27,084</b>	<b>\$485</b>
<b>2006</b>	<b>\$7,609,658</b>	<b>17,833</b>	<b>\$492</b>
<b>2005</b>	<b>\$20,080,172</b>	<b>42,106</b>	<b>\$537</b>
<b>2004</b>	<b>\$14,260,450</b>	<b>32,520</b>	<b>\$439</b>
<b>2003</b>	<b>\$10,992,972</b>	<b>24,310</b>	<b>\$375</b>
<b>2002</b>	<b>\$14,043,117</b>	<b>29,557</b>	<b>\$423</b>
<b>2001</b>	<b>\$19,231,816</b>	<b>36,621</b>	<b>\$435</b>
<b>Last 5-Year Average</b>	<b>\$10,600,265</b>	<b>24,398</b>	<b>\$408</b>
<b>10-Year Average</b>	<b>\$13,160,985</b>	<b>28,710</b>	<b>\$427</b>

\*Timber Sale Value is gross timber sales value before project work credits are subtracted

\*\*Average stumpage price of sold sales per thousand board feet



**Figure 4. Historical and Forecasted U.S. Housing Starts and Nonresidential Construction Spending,**



given population demographics, housing is likely to recover strongly once excess inventory is worked off and the U.S. economy gains momentum. The multi-family housing market remains slow but are off their lows, and there is some improvement in residential demand. Nonresidential construction could take years to recover and the remodeling market has retreated with limited credit lines and weakening consumer and builder confidence.

Along with housing starts, lumber and plywood prices had declined dramatically but then rebounded. As shown in Figure 5, log prices rebounded with increasing forest product prices and an overly optimistic housing start forecast. Forest product prices have recently fallen to approach recent 2009 lows. Recent indications are that log prices are beginning to retreat again and it is unlikely that substantial increases in log prices can be expected until there are indications that recovery of the housing market is eminent.

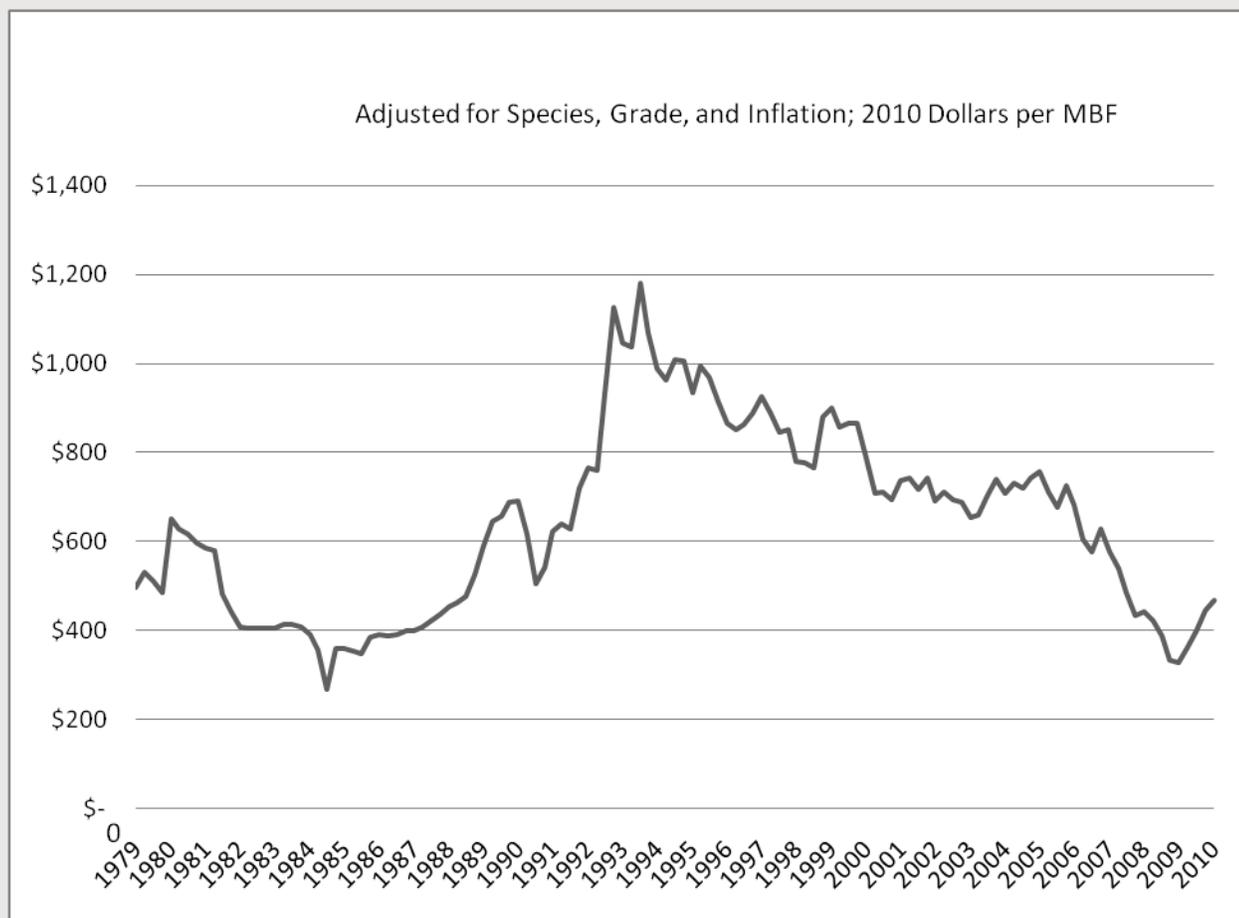
Bright spots for timber-related industries are rare but could include



that regional chip prices have remained relatively strong. With decreased lumber production has come a scarcity of chips and stable prices and chipping of smaller and low-quality logs that would have otherwise gone to lumber production. Although a relatively small segment of Oregon's timber harvests go overseas, export prices to Japan are relatively strong giving a needed boost to demand for timber. Pole prices remain strong, although markets can be hard to find.

Low levels of housing starts and anemic economic growth are expected to result in continuing downward pressure on lumber and plywood prices, with recovery in lumber, plywood, and log prices tied to an economic turnaround, an improving job market, and a significant recovery in housing starts. Recovery in demand for logs may be delayed if economic growth continues to stall and could fall

**Figure 5. Western Oregon Log Price Index**



further if credit constraints prevent the economy from expanding and if labor market improvement halts.

## Hardwood Sales Outlook

ODF regularly monitors the prices and trends of alder and other hardwoods to establish the starting point for the timber sale appraisal process. Along with regular monitoring of alder pond values, there is an active log accountability program, which provides monitoring, investigation and identification of current industry practices in the grading, pricing and utilization of different alder log sizes. Awareness of current industry practices and issues allows for response to changes and provides data for consideration when planning future sales.

Table 4 provides an examination of hardwood volume and value information from FY 2001 through FY 2010.

ODF continues to investigate opportunities to offer sales of alder, and sales in which alder is the predominant species. Due to current

**Table 4. Common School Forest Lands Hardwood Volume and Value Fiscal Years 2001 through 2010**

<b>Fiscal Year</b>	<b>Total Number of Timber Sales</b>	<b>Total Number of Hardwood Bid Species Sales</b>	<b>Hardwood Volume Harvested</b>	<b>Hardwood Value Harvested</b>
2010	12	1	1,227	\$430,770
2009	8	0	494	\$178,802
2008	18	1	463	\$174,382
2007	10	1	1,063	\$142,744
2006	12	1	2,613	\$746,779
2005	12	0	1,286	\$555,439
2004	10	0	536	\$187,234
2003	10	1	889	\$352,515
2002	12	0	786	\$345,688
2001	14	7	1,319	\$522,765



economic conditions, the demand for alder has significantly dropped, as have prices. There are no specific alder sales included in the FY 2011 Annual Operations Plan. CSFL include a relatively small volume of alder, which is difficult to offer as a small, “unbundled” sale opportunity.

## Common School Forest Lands Timber Sales

### Timber Management Activities

Activities conducted on the 120,924 acres of CSFL managed by ODF include: timber harvest, reforestation and intensive management, and road construction and maintenance. These 120,924 acres are composed of two DSL Asset Management Plan classifications: Special Stewardship and Forest Lands. The Special Stewardship acres equal 30,571. The Forest Lands acres equal 90,345.

Approximately 71 percent of these lands are managed under the strategies described in the Elliott State Forest Management Plan (adopted in 1994). The remaining 29 percent is managed under three other plans: the Northwest and Southeast Oregon State Forests Management Plans (both adopted in 2010) and the Eastern Region Long-Range Forest Management Plan (adopted in 1995).

Timber is harvested on CSFL through both regeneration and partial cut harvests. Regeneration harvests remove most of the trees on a site and allow a new



**Logs from the Elliott State Forest**

*Photo: Oregon Department of Forestry*



stand to be established. Regeneration harvests are the most cost effective harvest method, maintain a diversity of age classes across the landscape, and create the early seral habitats preferred by some wildlife species. Partial cut harvests provide an earlier flow of volume, improve stand growth, and accelerate the development of more complex habitat required by other wildlife species.

Harvests of timber on CSFL occurs through timber sale contracts. Information on CSFL timber sales is provided for timber sales sold during FY 2010, active timber sales where harvesting occurs during FY 2010, and planned timber sales for FY 2011. In addition, reforestation and intensive management activities can be summarized for each fiscal year and represent an investment in future volume and revenue.

Investments in the forest infrastructure through road management activities support timber harvest and other management actions on the forest. These activities also increase the asset value of the forest. Each of these categories is further discussed in the following sections.

## **Timber Sales Sold During Fiscal Year 2010**

During this fiscal year, 12 timber sales were sold that included CSFL (Table 5). These sales are estimated to produce a total volume of \$45.5 million board feet with a value of \$15 million. Nine of the sales were from the Elliott State Forest, and will produce approximately 92 percent of the estimated revenue. Timber sale preparation has been completed on the remainder of the FY 2010 sale plan and these sales will be offered in FY 2011. Revenue from sold sales will be received over the course of a three-year period. Total project costs from sales sold in FY 2010 will be about \$1,052,468. All were recovery sales (paid for based on volume measured after cutting rather than in a lump sum payment on standing cruise volume).

The Elliott State Forest, managed by ODF's Coos District, is the largest contributor to the volume and value of CSFL timber sales. During FY 2010, 65 percent of the statewide CSFL volume (24,812 MBF) and 78 percent of the CSFL statewide value (\$8,221,998) was generated on the Elliott State Forest. A five year average analysis illustrates that 66 percent of the statewide harvested volume and 76 percent of the harvested value has been generated from the Elliott State Forest. The total acreage managed by ODF consists of 86,367 acres of CSFL (90.7 percent) and 8,06 acres of BOFL (9.3 percent).



**Table 5. Common School Forest Lands Timber Sales Sold in Fiscal Year 2010**

Sale Name	ODF District	CSFL % of Sale	Timber Sale Volume (mbf)	CSFL Volume (mbf)	Acres Partial Cut	Acres Clear Cut	Total Project Costs	CSFL Project Costs	Net Sale Volume	Net CSFL Value
Elkhorn Ranch	Coos	100	5,189	5,189	0	94	\$77,789	\$77,789	\$1,274,441	\$1,274,441
Milli-coma Cougar	Coos	100	5,817	5,817	0	89	\$142,098	\$142,098	\$2,173,344	\$2,173,344
Lower Deer	Coos	100	4,032	4,032	0	65	\$241,379	\$241,379	\$921,842	\$921,842
Stulls Ridge No. 3	Coos	100	5,405	5,405	0	101	\$106,533	\$106,533	\$1,570,895	\$1,570,895
Sullivan Daggett Divide	Coos	83	2,363	1,961	0	72	\$65,685	\$54,519	\$299,977	\$248,981
South Kelly Ridge	Coos	100	3,254	3,254	0	55	\$90,239	\$90,239	\$915,958	\$915,958
Double Fish	Coos	100	6,827	6,827	0	114	\$57,910	\$57,910	\$3,278,889	\$3,278,889
Long Cougar	Coos	100	7,571	7,571	0	133	\$91,175	\$91,175	\$3,185,078	\$3,185,078
Pegleg Panther	Coos	100	1,951	1,951	0	42	\$80,610	\$80,610	\$812,539	\$812,539
Buck N Bull	West Oregon	92	1,355	1,247	30	49	\$76,926	\$70,772	\$225,614	\$207,565
Poole Haul	West Oregon	100	511	511	0	24	\$4,184	\$4,184	\$99,300	\$99,300
Sharp Ridge	Tillamook	100	1,683	1,683	54	2	\$35,260	\$35,260	\$310,787	\$310,787
<b>Totals:</b>			45,958	45,448	84	840	\$1,069,788	\$1,052,468	\$15,068,664	\$14,999,619

The data is produced from an ODF sale plan database. All dollar amounts were rounded to the nearest whole dollar. All board foot amounts were rounded to the nearest board foot.



## Elliott State Forest Harvest Levels

### Elliott State Forest Management and Habitat Conservation Plan

The Elliott State Forest is in the second decade of implementing the 1995 Elliott State Forest FMP and HCP for the northern spotted owl. In the first five years of this second decade, planned Annual Operations Plan (AOPs) harvest volumes (FY 2005 through FY 2009) averaged 24.8 MMBF, which was eight percent less than the 27.1 MMBF attained in the first decade (FY 1995 through FY 2004). However, the FY 2010 AOP contained a significant increase in volume through the addition of two mature stand thinning sales which has brought the second decade average up to 27.7 MMBF – similar to the first decade average.

In FY 2007, the State Forests Division conducted an analysis of both



*Photo: Oregon Department of Forestry*

**A layered stand on the Elliott State Forest**

the 1995 plan's harvest model outputs and recent AOPs, as well as a review of the 1995 Elliott State Forest FMP and HCP, to better communicate factors that contributed to the lower harvest average in the first five years of the second decade. This analysis and review identified four primary contributing factors: expiration of the marbled murrelet ITP, the Elliott State Forest FMP and HCP revision process, age class of harvestable stands, and thinning opportunities. Although the volume went up in FY 2010, due to the addition of mature stand thinning sales, the factors in the analysis are still relevant to the Elliott State Forest's ability to consistently produce volume and revenue in the next few years. Following is a discussion of each of these factors.



## **Marbled Murrelets**

The federal ITP for marbled murrelets expired in 2001, six years into the first decade of plan implementation. Surveying planned timber sales for the marbled murrelet (under take avoidance protocol) has resulted in harvest restrictions in additional stands, particularly the older, higher volume stands. About 25 percent of annual proposed sales are affected by marbled murrelet occupancy, resulting in over 5,600 acres of additional marbled murrelet management areas having been set aside than was planned when the 2001 ITP was signed. These restrictions have led to fewer AOP harvests in older high-volume stands and more in lower-volume mid-age stands.

## **Elliott State Forest FMP and HCP Revision Process**

During the last several years, the Department has been in the process of developing a revised Elliott State Forest FMP and HCP, which has resulted in less area from which to choose harvests. Under the 1995 Elliott State Forest FMP and HCP, less than half of the forest has been available for harvest because of the long rotation basins and reserve areas in these plans. In addition, the proposed conservation areas of the revised plan are being avoided to maintain the revised plan's integrity. This has temporarily removed additional acreage from which sales can be chosen—particularly in the older high-volume stands.

## **Age Class Distribution**

The harvest model used in the development of the 1995 Elliott State Forest FMP and HCP predicted clearcut harvest acres by age class, decade, and basin. Model outputs showed little change between the first and second decades for total harvest acres (478 to 510 acres) but did show a significant shift in the age classes to be harvested. First-decade predictions showed 95 percent of the harvest occurring in stands over 100 years in age. Second-decade predictions showed 22 percent of the harvest occurring in approximately 40-year-old stands and another 13 percent in 60-to 100-year-old stands. The remaining second-decade harvest comes from older stands. As predicted, the AOPs over the last six years have proposed clearcut harvest in stands approximately 40 years old (14 percent of the total clearcut harvest acres). These younger stands have less volume per acre than the older stands, contributing to a lower total AOP volume.

## **Thinning Opportunity**

The 1995 Elliott State Forest FMP included an estimate of 500 acres



of thinning per year only for the first decade, producing an estimated three MMBF of annual volume. (There was not a thinning acre objective identified for the second decade.) An estimate of thinning was not part of the harvest model. The AOPs averaged 471 acres of thinning per year for the first decade of the Elliott State Forest FMP and HCP. Approximately 1500 acres of young stand thinning have been proposed thus far in the second decade, but—due to poor market conditions—none have been moved forward for sale. However, about 1200 acres of mature stand thinning containing more marketable trees than young-stand-thins were included for sale in the 2010 AOP.



*Photo: Oregon Department of Forestry*

**Trail Butte Thin—Elliott State Forest**

## **Summary of Active Timber Sales**

There were 27 active timber sales on CSFL during FY 2010. The volume of timber harvested from CSFL for these sales totaled 24.8 MMBF, with a timber value of \$8.4 million (Table 7). This is a decrease in volume from FY 2009, which totaled 29.3 MMBF with a value of \$12.4 million.

Volume and value details related to the active sales are shown in Table 7. Funds in this table represent the value of timber harvested during this period. For comparison, the revenues in Table 1 reflect actual revenue transferred to the DSL. Differences are due to timing



**Table 6. Active Timber Sales on Common School Forest Lands  
Volume and Value, Fiscal Year 2010**

<b>Sale Name</b>	<b>ODF District</b>	<b>Sale Number</b>	<b>CSFL Percent of Sale</b>	<b>CSFL Harvested MMBF</b>	<b>Estimated Value* CSF</b>
Burnt Black	West Oregon	107050	4	0.00	(\$143)
Miller Deer	West Oregon	108014	18	0.01	\$270
Beavers Rock	West Oregon	108028	2	0.01	\$1,282
Haulin Wolf	West Oregon	108050	99	0.71	\$274,919
Biker Baber	West Oregon	109002	82	2.08	\$649,477
Strombo Combo	West Oregon	109054	8	0.27	\$41,476
Buck N Bull	West Oregon	110020	92	0.92	\$206,964
Wimble Special	Western Lane	109070	100	0.21	\$98,331
McKnob	Astoria	106076	1	0.00	(\$42)
Summit Stone	Astoria	108052	22	0.83	\$113,271
Summit Stone Pulp	Astoria	210426	65	0.01	\$390
Chicken Combo	Forest Grove	109031	2	0.03	\$7,105
Juno Bay	Tillamook	108041	12	0.27	\$36,427
Western Knife	Coos	108034	100	0.26	\$149,878
Umpcoos Ridge	Coos	108036	100	1.66	\$914,151
Larson Creek No. 2	Coos	108038	99	0.95	\$277,057
Fishing Cougar	Coos	108055	100	4.52	\$2,610,455
Piledup Marlow No. 2	Coos	108078	13	0.02	\$4,007
North Buck	Coos	108088	100	0.00	\$227
Double Barrel	Coos	109034	100	0.04	\$1,123
Umpcoos Ridge No. 2	Coos	109037	100	4.01	\$1,570,251
Mill Creek Bridge No. 2	Coos	109039	100	2.14	\$367,669
Panther Bowl	Coos	109053	100	0.76	\$229,090
Lower Deer	Coos	110030	100	0.11	\$31,874
Sullivan Daggett Divide	Coos	110032	83	1.58	\$239,201
Beaver Domination	Klamath-Lake	108048	100	0.33	\$57,389
Slapdash	Klamath-Lake	109085	92	3.09	\$339,898
<b>Totals:</b>				<b>24.81</b>	<b>\$8,221,998</b>

\*Value equals gross value of timber sales before project costs are subtracted.



of receipts and to project costs. Project costs associated with active timber sales—work on roads, bridges, culverts, etc., are accomplished in conjunction with timber sales. Project costs for FY 2010 totaled \$732,194.

## **Timber Sale Contract Modifications, Extensions, and Suspensions**

Of the 27 active timber sales on CSFL during FY 2010, eight were modified and none were given extensions of time. This compares to FY 2009 when three sales were modified and two were given time extensions. The modifications in FY 2010 included changes to log prices to encourage removal of utility and pulp material and adding project work for additional road improvement that was required.

Four sold sales continued to be in suspension during FY 2010. These suspensions resulted from an offer ODF made during FY 2009 to timber sale purchasers to suspend operations on timber sales meeting certain requirements, thus allowing more flexibility to complete contract obligations. The objective of the suspension offers is to protect Oregon's timber industry infrastructure and prevent expensive contract defaults. A total of four timber sales on CSFL, with four different purchasers, accepted the suspension offer. Three of these purchasers selected the option to pay monthly installment amounts while not harvesting. The other purchaser selected an option to delay payments until the suspension is complete and pay interest on the future payments.

## **Planned Timber Sales**

The FY 2011 sale plan includes 485 acres of regeneration harvest and 1,426 acres of partial cutting on CSFL. Table 7 provides additional information on these planned sales. The total estimated CSFL volume is 37.4 MMBF, with an estimated net value of \$11.3 million. This value will not be realized until 2012 and beyond, depending on when sale purchasers choose to harvest these sales.

Project costs of about \$0.7 million will pay for road and bridge construction, road improvement and maintenance, rock stockpiles, culvert replacement, creation of wildlife trees and snags, and stream structure and riparian area rehabilitation. The Coos District's planned FY 2011 CSFL harvest is 32.1 MMBF, or 86 percent of the total CSFL harvest volume.



**Table 7. Annual Operations Plans  
Timber Sales Planned on Common School Forest Lands in Fiscal Year 2011**

<b>Sale Name</b>	<b>ODF District</b>	<b>CSFL % of Sale</b>	<b>Timber Sale Volume (mbf)</b>	<b>CSFL Volume (mbf)</b>	<b>CSFL Acres Partial Cut</b>	<b>CSFL Acres Clear Cut</b>	<b>CSFL Project Costs</b>	<b>Total Gross Sale Volume</b>	<b>Net CSF Value</b>
Cold Crystal	Coos	100	4,700	4,700	0	81	\$46,600	\$1,762,500	\$1,715,900
Deer Headwaters	Coos	100	2,100	2,100	0	38	\$94,625	\$842,000	\$747,375
Flying Fish	Coos	100	3,800	3,800	0	72	\$52,500	\$1,510,000	\$1,458,300
Kelly Slim	Coos	100	1,600	1,600	0	33	\$22,000	\$646,800	\$624,800
Marlow Millicoma Divide	Coos	2	2,100	42	0	1	\$700	\$840,000	\$16,100
Millicoma Meander	Coos	100	3,300	3,300	0	68	\$54,500	\$1,256,000	\$1,201,500
Millicoma Lookout	Coos	100	2,900	2,900	0	51	\$113,000	\$2,020,500	\$1,031,000
North Goody Creek	Coos	100	8,100	8,100	548	0	\$50,000	\$697,750	\$1,970,500
South Goody Creek	Coos	100	2,800	2,800	256	0	\$50,000	\$660,800	\$647,750
Stulls Ridge Steer	Coos	100	1,600	1,600	0	28	\$39,000	\$1,399,200	\$621,800
Sullivan Succotash	Coos	34	3,500	1,190	0	37	\$21,420	\$231,000	\$454,308
ReBert	Klamath-Lake	100	1,848	1,848	462	0	\$30,242	\$837,000	\$200,758
Purna Punch	Astoria	5	2,800	140	2	3	\$4,625	\$4,625	\$37,225
Sager the Horrible	Astoria	1	1,600	8	1	0	\$303	\$332,390	\$1,359
Bear Power	West Oregon	100	800	800	0	42	\$15,000	\$125,000	\$110,000
Beaver Slide	West Oregon	33	2,200	748	0	17	\$10,382	\$553,000	\$174,814
Black Goat	West Oregon	38	2,700	1,026	47	14	\$22,420	\$473,000	\$157,320
Coleman Thin	Southwest Oregon	100	700	700	110	0	\$30,000	\$132,000	\$102,000
<b>Coos/Elliott Subtotals:</b>			36,500	32,132	804	409	\$544,345	\$12,780,350	\$10,489,333
<b>Totals:</b>			49,148	37,402	1,426	485	\$1,069,788	\$15,463,740	\$11,272,810



DSL reviews ODF's AOPs.

## Reforestation and Intensive Management

Intensive management activities (Table 8) represent an investment in future benefits such as volume, timber quality, or habitat.



*Photo: Oregon Department of Forestry*

**Forest Nursery Seedlings**

Reforestation activities include site preparation, planting, and tree protection. These activities are dependent on the timber harvest schedule, 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 can often result 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. Due to 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 on schedule, while an excess may allow the planting of an 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



**Table 8. Intensive Management Activities on Common School Forest Lands  
Fiscal Year 2010**

<b>Management Activity</b>	<b>Acres Planned</b>	<b>Acres Completed</b>	<b>Average Cost per Acre</b>	<b>Total Cost</b>
Initial Planting	582	483	\$316	\$152,850
Interplanting	204	315	\$124	\$39,059
Invasive Plants	4	0	\$0	\$0
Precommercial Thinning	125	0	\$0	\$0
Pruning	0	0	\$0	\$0
Release—Chemical—Aerial	130	97	\$38	\$3,661
Release—Chemical—Hand	13	0	\$0	\$0
Release—Mechanical—Hand	15	100	\$52	\$5,180
Site Preparation—Mechanical	0	0	\$0	\$0
Site Preparation—Slash Burning	103	65	\$76	\$4,926
Site Preparation—Chemical—Aerial	475	371	\$58	\$21,489
Site Preparation—Chemical—Hand	6	0	\$0	\$0
Surveys—Invasive Plants	4	0	\$0	\$0
Surveys—Reforestation <sup>1</sup>	380	298	\$1	\$285
Tree Protection—Barriers	69	45	\$83	\$3,740
Tree Protection—Direct Control	1,561	1,417	\$41	\$57,745
Underplanting	6	0	\$0	\$0
<b>Totals:</b>	<b>3,677</b>	<b>3,191</b>	<b>N/A</b>	<b>\$288,935</b>

<sup>1</sup>Reforestation Surveys evaluate plantation performance two to six years after establishment to determine the need for additional intensive management activities.

and physiological development of the vegetation are critical. Because of these variables, what is accomplished is often different than what was planned.



Release, pre-commercial thinning, and fertilization 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 saved or shifted to accomplish higher priority or more cost effective activities. Pruning is now mostly done to reduce the amount of white pine blister rust on western white pine. Pine is planted in root disease areas because it is less susceptible to the disease than other conifers. Invasive species (including noxious weed) management activities are conducted concurrently or as an opportunity with other vegetation management practices, or to target weeds in specific areas. These activities may be conducted as part of a coordinated effort in partnership with other landowners and agencies.

## Road Management Activities

Roads essential to forest management are constructed or improved as needed. Construction includes any new roads and reconstruction or relocation of abandoned roads, while improvement included bring an old road up to current standards. Road vacating is used on a limited basis, and is the permanent closure of roads, including removal of stream crossings and complete stabilization of the prism, and is used for roads that are no longer needed and that often pose risk to other resources.



*Photo: Oregon Department of Forestry*

**Road work on the Elliott State Forest**



**Table 9. Annual Road Work on Common School Forest Lands  
Fiscal Year 2010**

District/ County	Aggregate/Paved Surface			Dirt Surface			Bridges
	Constructed	Improved	Vacated	Constructed	Improved	Vacated	Installed
Astoria/ Clatsop	0.75 miles			0.1 miles			
Coos-Elliott State Forest/							
Coos	0.4 miles						
Douglas	0.5 miles						
Klamath/ Klamath		0.2 miles					
West Oregon/ Lincoln	0.1 miles	0.9 miles		0.4 miles			

Table 9 is designed to provide information about the road system management on CSFL as they vary by District. Activities listed occurred during FY 2010. Early road construction on the Elliott State Forest and good maintenance since that time has enabled effective management with little new construction or improvement. Project work during FY 2010 was reduced in accordance with reduced revenues, thus no new bridges.

### **Research and Monitoring**

The forest management plans for State Forests emphasize the need for adaptive approaches to management, in which the results of management actions are measured and compared to pre-determined objectives, and changes are made where necessary. This approach requires a commitment to long-term information gathering and the incorporation of that information into the decision-making process. The State Forests Division's Research and Monitoring Program was developed to ensure that the levels of research, monitoring, and



technology transfer are adequate to meet the information needs required by these long-range management plans.

In FY 2009, the program supported approximately 20 research and monitoring projects and forestry research cooperatives at a level of approximately \$1.2 million.. Starting in FY 2010, which began July 1, 2009, support for research and monitoring projects was greatly reduced. The program will continue to support some research cooperatives, such as the Hardwood Silviculture Cooperative, Vegetation Management Cooperative, etc., as well as provide limited support to the Trask Watershed Study and to RipStream. Learning from forest science and experience will be constrained for some time.

Following are brief descriptions of current research and monitoring projects and objectives of the research cooperatives:

## **Research and Monitoring Projects**

### **Implementation Monitoring**

Implementation Monitoring broadly seeks to determine if management and conservation strategies specified in ODF's Forest Management Plans (FMPs) are being properly implemented. It also helps establish baseline conditions from which to measure effectiveness of the strategies. This type of monitoring measures on-the-ground indicator variables to assess how management practices are put into practice and is an accounting of what we did. Further, it seeks to determine to what degree post-operation conditions reflect original management intent defined in pre-operational prescriptions. Lastly, Implementation Monitoring helps assess the feasibility and achievability of strategies and targets.

This study addressed the metrics and strategies established by the Landscape Strategies and the Aquatic and Riparian Strategies in the FMPs, as well as the strategies for management of Salmon Anchor Habitat areas.

A total of 55 stands across seven operational districts were sampled from AOPs in FYs 2002-2006. Data was collected in the upland areas using standard inventory methods and, separately, data was collected in the Riparian Management Areas of these stands using methodology derived from a 2008 pilot study. Additionally, a set of questions was answered by contract administrators for each of the sales in the study to assess implementation of strategies that were not quantitatively measurable.



Overall, Implementation Monitoring showed:

- Department staff indicated understanding and intent to implement the strategies in the FMPs.
- Broad compliance with FMP strategies in the upland and riparian management areas, with a few areas of over or under achievement of strategies.
- A number of areas where the FMP targets or goals are unlikely to ever be achieved without significant investment (e.g. converting hardwood riparian areas to conifer)

Through adaptive management, results of this study will inform implementation of strategies to achieve goals in the forest management plans and will also provide insight into improvement of the definitions and standards in the forest management plans themselves.

### **Riparian Function and Stream Temperature (RipStream)**

The RipStream project is designed to measure the effectiveness of stream protection rules as prescribed for State Forests and private forestlands. RipStream study sites are located throughout the Coast Range geographic region on small- and medium-sized fish-bearing streams. The study design called for sites to have two years of pre-harvest data, followed by five years of post-harvest data collection. Currently, all 33 sites (18 private and 15 State) have at least three years of post-harvest data. This project was initiated in 2002 and the final year of data collection was originally scheduled to be 2011. Without funding from outside grants, data collection will likely remain incomplete. Significant data collection gaps remain in post-harvest Year-Five data (~30 percent complete).

The completed analysis addressed the question of whether or not during the first two years post-harvest, RipStream sites met Department of Environmental Quality stream temperature standards on state and private forests during the first two years post-harvest. The analysis evaluated two Department of Environmental Quality temperature standards: the Biologically-Based Numeric Criteria and the Protecting Cold Water Standard (PCW).

This analysis indicated a low risk that timber harvests are non-compliant with the Numeric Criteria on both state and private sites. Timber harvests designed to the minimum Forest Practices Act riparian protection standards for Medium and Small Type F streams



exceeded the PCW at a greater frequency than would be expected by chance. Timber harvests on state forestlands did not exceed the PCW more frequently than expected under natural background conditions.

The analysis focused on a strict regulatory perspective of stream temperature. While designed to rigorously address regulatory questions, the results did not address functional questions of what site or other environmental variables specifically influence stream temperature. Results of the PCW analysis have been submitted to the peer-reviewed journal, *Water Resources Research*. A second manuscript is being prepared describing Biologically Based Numeric Criteria results. Pre-harvest stream temperature conditions were described in an earlier journal article. Another eight analysis products (papers or reports) are planned for RipStream, but are dependent on grant or other funding.

A functional analysis is being conducted to determine the magnitude of stream warming or cooling attributable to timber harvest. The analysis will address stream temperature behavior in relation to treatment reach length, changes in shading, stream gradient and other factors. This analysis will provide insight into timber harvest features that contribute to changes in stream temperature, an ability the current regulation compliance analysis lacks.

### **Trask River Watershed Study: Examining the effects of current forest practices on varying scales**

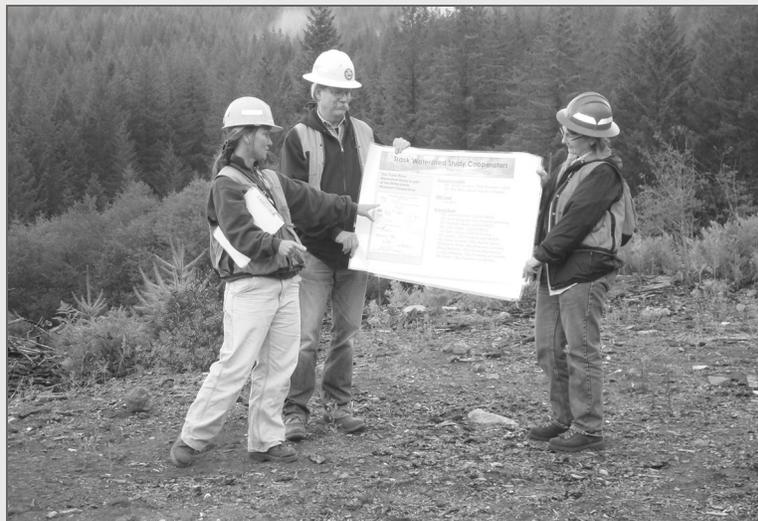


Photo: Nancy Hirsch, Oregon Department of Forestry

**Touring the Trask River Watershed Study Area**



As one of three watershed-scale studies within the Watershed Research Cooperative (<http://watershedsresearch.org/>), the Trask River Watershed Study is examining three different best management practices across three ownerships when harvesting around small non-fish-bearing streams. This study is testing the effectiveness of these best management practices in achieving stream protection goals. Ultimately, this cooperative research with Weyerhaeuser Company



*Photo: Nancy Hirsch, Oregon Department of Forestry*

### **Touring the Trask River Watershed Study Area**

and the U.S. Bureau of Land Management will help ODF understand how aquatic systems, particularly small headwater streams, respond to forest harvest operations and the extent to which these impacts are transferred downstream.

The study addresses the following questions:

1. What are the pre-harvest conditions in the small non-fish-bearing streams and downstream in the fish-bearing sections?
2. How does forest harvest affect temperature, flow and sediments in the headwaters? Are effects detected downstream?
3. How does natural variability and forest harvest influence fish populations?
4. What are the effects of adjacent forest harvest on instream insects? Are effects transferred downstream?
5. What are the effects of adjacent forest harvest on amphibians? Are effects transferred downstream?



A contextual analysis has been completed describing background watershed conditions. Data have been collected in headwater and larger streams including stream flow, suspended sediment, channel habitat, amphibian and aquatic insect distributions and characteristics, riparian conditions, and fish. These data are collected under a common study plan which will allow for analyses that account for linkages between these parameters.

An important output from the Trask River Watershed Study is published science from which ODF can consider effectiveness of our management strategies. This will involve several outlets including masters theses, PhD dissertations, and peer-reviewed science journals. To date, several papers have been presented at scientific conferences and two Masters and one PhD theses have been completed

Another important output is outreach to local, state, and federal partners. In 2010, six tours of the watershed were conducted and included representatives from state and federal natural resource agencies, professional organizations, county commissioners, local community organizations, BOF members, and conservation groups.

The study duration is 2007-2016. General data collection began in 2006, with more focused approaches implemented in 2007. Road

construction will take place in 2011, allowing four years of pre-treatment data collection. Harvest will occur in 2012 and the study will end in 2016 after four years of post-harvest data collection.



*Photo: Nancy Hirsch, Oregon Department of Forestry*

**Touring the Trask River Watershed Study Area**



## Research Cooperatives

### Hardwood Silviculture Cooperative

The Hardwood Silviculture Cooperative is a multi-faceted research and education program focused on the silviculture of red alder (*Alnus rubra*) and mixes of red alder and Douglas-fir (*Pseudotsuga menzeisii*) in the Pacific Northwest. The goal of the cooperative is to improve the understanding, management, and production of red alder.

### Swiss Needle Cast Cooperative

The original mission of the Swiss Needle Cast Cooperative, formed in 1997, was broadened in 2004 to include research aiming to ensure that Douglas-fir remains a productive component of the Coast Range forests. The cooperative supports research and monitoring across a broad range of disciplines to understand the disease and causal or contributing factors. Major areas of research include impacts on tree growth, pathogen biology/ecology, host physiological response, silvicultural treatments, host tree genetics/resistance, direct control, and tree nutrition. ODF participates in multiple studies with the Swiss Needle Cast Cooperative.

### Stand Management Cooperative

The mission of the Stand Management Cooperative is to provide a continuing source of high quality information on the long-term effects of silvicultural treatments and treatment regimes on stand and tree growth and development and on wood and product quality. The Stand Management Cooperative is a cooperative effort of landowners, processors, research agencies, and universities. The cooperative was formed to create a pool of funding, scientific talent, and long-term continuity necessary to achieve the mission.

### Vegetation Management Research Cooperative

Formed in 1993, the Vegetation Management Research Cooperative sets out to conduct applied reforestation research of young plantations from seedling establishment through crown closure with an emphasis on operational vegetation management. The cooperative also promotes reforestation success such that survival, wood-crop biomass, and growth are maximized while protecting public resources.

### Center for Intensive Planted Forest Silviculture



The mission of the Center for Intensive Planted Forest Silviculture is to understand the interactive effects of genetics, silviculture, protection (from insects, disease, and animal damage), competition, nutrition, and soils on the productivity, health, and sustainability of intensively-managed, planted forests.

### **Pacific Northwest Tree Improvement Research Cooperative**

The purpose of the Pacific Northwest Tree Improvement Research Cooperative is to conduct genetics and breeding research on Pacific Northwest tree species with the goal of providing priority information that will enhance the efficiency of tree improvement efforts. Emphasis is on region-wide problems dealing with major coniferous species. The cooperative is concerned with both tree breeding and mass production of genetically improved materials. The intent is to complement and supplement research by other organizations in the region and to avoid duplication. Another important objective of the cooperative is to foster communication among tree improvement workers throughout the Pacific Northwest.



## *Section 2, All State Forests Lands*



### Public Involvement

The State Forests Division continues to value the role of the public in the development and implementation of regional FMPs, recreation plans and activities.

#### **Annual Operations Plans**

Each year, members of the public are invited to comment on the AOPs for the nine districts with state-managed forestlands. A district AOP 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.

After public comments have been considered and any changes made, district foresters approve the AOP for their districts by June 30. AOPs are available for review at ODF District and Area offices, and Salem headquarters. All AOPs are also posted on the ODF web site.

The public involvement process provides an opportunity for ODF districts to share their annual plans, and provide opportunities for the public to ask questions and offer comments on the planned activities on state forestlands. Written comments providing the most useful suggestions focus on one or more of the following:

- enhancing the consistency of an annual plan with the forest management plan;
- improving the clarity of an annual plan;



- providing new information that affects an annual plan (such as location of a domestic water source or cultural resource site); or
- improving the efficiency and effectiveness of an annual plan or planned operation.

The 45-day comment period for the FY 2011 AOPs was held from March 29 to May 12, 2010

## **Public Involvement Opportunities on Land Exchanges**

A land exchange between the BOF, SLB, and Starker Forests, Incorporated, affecting forestlands in Benton, Lincoln, and Polk counties was made available for public review in spring 2010. Public hearings on the proposed land exchange were held in April 2010 in Newport, Corvallis, and Dallas, with written public comments accepted until May 24, 2010. The purpose of this exchange was to consolidate lands managed by ODF's West Oregon District and to improve public access to state forest lands. This proposed land exchange includes one parcel in Polk County of 40 acres of CSFL. The land exchange was ratified by each Board of Commissioners for the three counties in June 2010, with adoption of the proposal by the BOF and the SLB scheduled for the fall of 2010.

## **Land Exchanges, Acquisitions, and Decertification**

ODF is working collaboratively with DSL across multiple districts updating land acquisition and exchange plans, and reviewing parcels for decertification consistent with the Asset Management Plan.

In 2008, 15 parcels (approximately 3280 certified acres) of CSFL in Coos, Curry, Douglas, and Lane counties were conditionally decertified by the BOF and SLB. Of those 15 parcels, 11 parcels totaling 2,309 acres have been sold by DSL, with four parcels (approximately 971 acres) remaining to be sold. In 2010, 17 parcels (approximately 3,077 certified acres) of CSFL in Benton and Lincoln counties were conditionally decertified by both boards. Eight of these parcels are scheduled to be auctioned by DSL in November 2010.



# Elliott State Forest— Coos District

*The Coos District includes Coos, Curry, and western Douglas counties on the southern Oregon coast, and contains about 86,367 acres of Common School Forest Lands, and 8906 acres of Board of Forestry Lands. The largest block of this land is 93,003 acres in the Elliott State Forest, located southeast of Reedsport.*

## **Elliott State Forest Management Plan and Habitat Conservation Plan**

Planning for revision of the Elliott State Forest FMP and HCP continued in FY 2010. The planning team consists of a policy steering committee, which includes representation from ODF, DSL, Department of Justice, Oregon Department of Fish and Wildlife, Coos County, South Coast Education Service District, and a core team comprised of technical specialists from ODF and the Oregon Department of Fish and Wildlife.

The final draft of the Elliott State Forest FMP was completed by the planning team and made available for review and comment at public meetings in September 2005. In January and February 2006, the BOF and SLB approved continued development of the Elliott State Forest HCP consistent with the strategies in the draft Elliott State Forest FMP.

The draft Elliott State Forest HCP was completed in 2007 and an EIS contractor worked with ODF and the federal services to complete the public review draft EIS. The draft Elliott State Forest HCP EIS went out for a 90-day public review in August of 2008. The Elliott State Forest HCP strategies have been developed to minimize and mitigate the effects of authorized incidental take associated with forest management. The revised draft Elliott State Forest HCP includes the northern spotted owl, marbled murrelet, coho salmon, and 13 other species at risk for listing that are known to, or could, inhabit the Elliott State Forest.

In early 2009, negotiations on the final Elliott State Forest HCP strategies resumed with the federal services in light of the public comments received on the draft Elliott State Forest HCP and EIS.



USFWS and the NMFS identified a number of substantive issues from the public comments that they believed would require changes to the draft Elliott State Forest HCP. During 2009, ODF negotiated with the federal agencies on those issues and reached agreement on the most significant issues with the USFWS, but not with NMFS.



Photo: Oregon Department of Forestry

#### **Riparian area leave trees—Elliott State Forest**

The NMFS issues focused on the aquatic/riparian strategies that deal with stream temperature, in-stream wood delivery, potential sediment delivery to streams, roads management, identification and management of steep slope areas, and committing to specific watershed restoration activities as mitigation for harvest in upslope areas. ODF and NMFS do not share the same interpretation of the science involved with aquatic/riparian management and have not come to agreement that the Elliott State Forest aquatic/riparian strategies would achieve the results desired by both agencies.

Given that ODF and NMFS have not reached common ground on the science and outcomes from the proposed aquatic/riparian strategies in the revised HCP, the SLB and BOF directed ODF to:

1. Collaborate with the NMFS and the DSL to initiate an independent scientific review of aquatic/riparian management strategies to help resolve differing viewpoints on protecting streams and aquatic habitat. The target date for completing this review is October 2010 and the deadline for having resolution to the Elliott State Forest HCP is December 31, 2010.
2. Set a December 31, 2011, deadline for completing approval of a revised HCP that is acceptable to the ODF, DSL, USFWS and NMFS. If a new plan is not approved by this date, the 1995 Elliott State Forest HCP will be terminated and a take avoidance strategy will be implemented to protect threatened and endangered species on the forest.



3. Concurrent with the above, develop a revised Elliott State Forest FMP that would use take avoidance for management of threatened and endangered species on the Elliott State Forest, and have the revised plan in place by December 31, 2011, if a new Elliott State Forest HCP is not approved.

## **Potential for Carbon Storage on the Elliott State Forest**

ODF conducted an investigation of the feasibility of a forest carbon project on the Elliott State Forest as a means to improve overall revenues realized from this asset. Results of this analysis indicated that, as a consequence of a number of protocol requirements, ODF would not be able to meet its mandate to “maximize revenue to the CSF over the long term, consistent with sound techniques of land management” through the sale of carbon offset credits.

Of all the accounting schemes (e.g. Chicago Climate Exchange, Voluntary Carbon Standard, Regional GHG Initiative, Western Climate Initiative, etc), the Climate Action Reserve (CAR) is emerging as a popular and rigorous standard for carbon offset projects in the western United States. For the purposes of the Elliott State Forest analysis, ODF chose to evaluate the Improved Forest Management option under the CAR Forest Project Protocol, v.3.1. Requirements for this protocol and the rationale for ODF’s decision are described below.

### **Protocol Requirements**

The Forest Project Protocol provides requirements and guidance for quantifying the net climate benefits of activities that sequester carbon on forestland. The goal of the protocol is to ensure that the net greenhouse gas (GHG) reductions caused by a project are accounted for in a complete, consistent, transparent, accurate, and conservative manner and may therefore be reported to the CAR as the basis for issuing carbon offset credits. Adherence to these standards ensures that emissions reductions associated with projects are real, permanent, and additional.

For the purposes of the protocol, a Forest Project is a planned set of activities designed to increase removal of CO<sub>2</sub> from the atmosphere, or reduce or prevent emissions of CO<sub>2</sub> to the atmosphere, through increasing and/or conserving forest carbon stocks. CAR registers three types of forest project activities: reforestation, avoided conversion, and improved forest management. Improved forest management



projects may be eligible on both private and public lands. Eligible management activities include: increasing the overall age of the forest by increasing rotation ages; increasing the forest productivity by thinning diseased and suppressed trees; managing competing brush and short-lived forest species; and, increasing the stocking of trees on understocked areas. These activities are commonly undertaken on the Elliott State Forest.

Forest projects must meet several other criteria and conditions to be eligible for registration with CAR, and must adhere to the following certain requirements related to their duration and crediting periods.

### **Additionality**

CAR registers only projects that yield GHG emission reductions that are additional to what would have occurred in the absence of a carbon offset market, i.e. under business as usual. Management practices required by law (e.g. riparian buffers) are not additional. Additionality requires carbon storage to be above and beyond that which occurs for compliance with relevant laws and regulations.

### **Permanence**

Increased carbon storage that occurs through land management can be reversed through changes in land use, resource management practices, or natural disturbances, which gives rise to concern over the “permanence” of sequestered carbon. CAR meets this requirement by ensuring that the carbon associated with credited GHG reductions remains stored for at least 100 years. CAR also addresses permanence through the use of a buffer pool where a certain amount of the carbon credits earned by the project are held as insurance to recoup carbon losses from reversals.

### **Leakage**

Leakage refers to the risk that the carbon benefits gained by one project will be negated by increased carbon emissions in another location as a direct or indirect result of the project. For example, a forestry offset project that involves reduced timber utilization in one stand cannot simply relocate timber harvests to another stand not included in the project area.

### **Crediting Period**

The baseline for any forest project registered with CAR is assumed to be valid for 100 years. This means that a registered project will be



eligible to receive credits for GHG reductions quantified under this protocol and verified by CAR-approved verification bodies, for a period of 100 years following the project's start date.

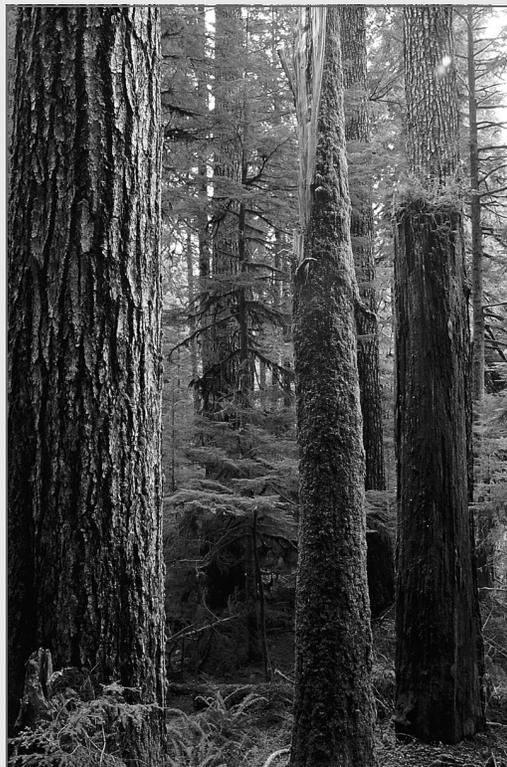
### **Baseline (General)**

The baseline is an estimate of what would have occurred in the absence of a forest project. Additionality is addressed by estimating the CO<sub>2</sub> emissions that would occur in the project area without the project and the comparing an estimate of the amount of CO<sub>2</sub> emissions that occur with the project. Any reduction in CO<sub>2</sub> emissions, either from sequestration and/or emission avoidance, provides the initial estimate that can be credited to the project. CAR requires that onsite carbon stocks be modeled for 100 years in each of the required carbon pools (e.g. standing live trees, shrubs and herbaceous understory, standing dead, downed wood, etc.) In addition, baseline carbon in harvested wood products must be estimated to account for any planned annual harvests.

### **Baseline (Public Lands)**

For improved forest management projects on public lands, the baseline must be estimated by: 1) conducting an initial forest carbon inventory for the project area; 2) projecting future changes to forest carbon stocks by extrapolating from historical trends and anticipating how current and future public policy will affect onsite carbon pools. The method that results in the highest estimated carbon stock levels must be used to determine the baseline.

To extrapolate from historical trends: 1) For project areas that have a ten-year history of declining carbon stocks, the baseline must be defined by the average of the



*Photo: Oregon Department of Forestry*

**Older forest structure**



carbon stocks over the past ten years and considered static for the project life (i.e. the same level of carbon stocks is assumed in every year); 2) for project areas that demonstrate an increasing inventory of carbon stocks over the past ten years, the growth trajectory of the baseline shall continue until the forest (under the baseline stocks) achieves a stand composition consistent with comparable forested areas that have been relatively free of harvest over the past 60 years.

To anticipate how current and future public policy will affect onsite carbon stocks, the baseline must be modeled incorporating constraints imposed by all applicable statutes, regulations, policies, plans and activity-based funding.

### **Rationale for ODF's Decision**

Several factors entered into the decision not to pursue a forest management project under the CAR Forest Project Protocol:

1) **Project Approval:** In order for a project to be accepted by CAR, it must pass a number of eligibility criteria. Projects are very likely to be considered non-additional if their implementation is required by law. Since the Elliott State Forest is currently managed under a HCP and since ODF wanted to continue management under a new HCP there was uncertainty, even at CAR, the project would meet the legal requirement test. "A project passes the legal requirement test when there are no laws, statutes, regulations, court orders, **environmental mitigation agreements, permitting conditions** or other legally binding mandates requiring its implementation, or requiring the implementation of **similar measures that would achieve equivalent levels of GHG emission reductions**". CAR was unable to assure eligibility under either a current or future HCP before submittal of project paperwork.

2) **Baseline/Additionality:** As mentioned above, projects on public lands require a 10-year "look-back" to determine baseline. Since the Elliott State Forest has been managed under an HCP since 1995, those years of quality habitat production and increasing inventory would have been modeled. This would result in a much higher baseline than either a no-HCP or industrial management scenario. Since ODF would continue to manage under an HCP, future management approaches would not be significantly different than current approaches, resulting in little or no additionality. This factor could have led to either a non-eligible determination by CAR, or to the inability to meet ODF's fiscal responsibility to the counties and CSF.



3) **Retiring Credits if no new HCP:** Another consideration was uncertainty surrounding approval of the new HCP. If ODF had entered into a project with a high baseline and little additionality based on the potential for HCP approval, ODF would have had even less favorable conditions if ODF did not receive the HCP and reverted to take-avoidance management approaches, likely leading to higher harvest levels and reduction in inventory. CAR does allow for project termination under specific circumstances. In the event that ODF would terminate the project early, ODF would be required to retire a quantity of credits equal to the amount estimated for the entire duration of the project (i.e. make the market whole). This could result in having to purchase credits on the open market to make up the necessary amount of credits.

4) **Annual Costs:** The CAR protocol requires annual inventory assessments, verification of the inventory (and carbon stocks) by third-party verifiers, project monitoring, and reporting. ODF's estimates for annual costs to meet these requirements were in the range of \$120,000. Given the current general economic situation and the likely high baseline/low additionality, ODF determined it would be prohibitively difficult to cover these costs.

5) **Market Uncertainty:** Finally, at the time ODF conducted this analysis, the carbon credit market was fluctuating widely, giving less confidence that ODF would be able to lock in a price that would enable ODF's mandate.

As this assessment shows, it will be difficult for ODF to develop a profitable forest carbon project on highly productive, west-side forests managed under the NW Oregon State Forests and Elliott State Forest FMPs, because of high baseline conditions. On the other hand, Gilchrist State Forest is a more likely candidate since it is a younger forest managed until recently under an industrial management scenario. It falls under the private lands baseline determination and improved management under the Eastern Oregon Region Long-Range Management Plan will result in substantial additionality.

## Marbled Murrelet Protocol Surveys

In 2009, 734 surveys were completed at 492 stations, representing 81 survey sites on the Elliott State Forest. These 81 sites represented 20 planned timber sales. Detections of marbled murrelets were recorded during 114 surveys at 45 different sites with 14 surveys recording sub-canopy behavior. Of the surveys with significant, sub-canopy detec-



tions, all were associated with protocol surveys of eight planned sales.

Sub-canopy detections of marbled murrelets resulted in the creation of five new Marbled Murrelet Management Areas (MMMA's) totaling 106 acres (Table 10).

**Table 10. Marbled Murrelet Management Areas Created in Fiscal Year 2010**

<b>MMMA Name</b>	<b>Sale Name</b>	<b>Acres</b>
Roberts Headwaters	Middle Ridges Thin	26
Little Bob	Middle Ridges Thin	20
Middle Roberts	Middle Ridges Thin	16
North Scholfield	Goody Goody Thin	28
South Scholfield	Goody Goody Thin	16
<b>Total:</b>		<b>106</b>

In addition to five new MMMA's being created, a total of 19 acres were added to one existing MMMA from sub-canopy detections (see Table 11).

Seven sale units were released for sale preparation after no significant detections were observed within the sale area during protocol surveys. The 2009 surveys began May 1 and ended August 2.

**Table 11. Acres Added to Existing Marbled Murrelet Management Areas in Fiscal Year 2010**

<b>MMMA Name</b>	<b>Sale Name</b>	<b>Acres</b>
Schumacher Headwaters	Left Shoe	19
<b>Total:</b>		<b>19</b>



## Oregon Plan for Salmon and Watersheds

The following activities were accomplished during FY 2010 under the Oregon Plan for Salmon and Watersheds:



*Photo: Oregon Department of Forestry*

**Preparing logs for placement in Elk Creek—Elliott State Forest**



*Photo: Oregon Department of Forestry*

**Completed log placement in Elk Creek—Elliott State Forest**





*Photo: Oregon Department of Forestry*

**Totten Creek Culvert Replacement (Before)—Elliott State Forest**



*Photo: Oregon Department of Forestry*

**Totten Creek Culvert Replacement (After)—Elliott State Forest**

- There were five sales completed during the reporting period where additional trees were retained along stream buffers under ODF Harvest Measure 62 for the Oregon Plan. Two of these sales included large wood placement along 1.5 miles of coho streams to improve fish habitat as part of the timber sale and another sale included 0.7 miles of road decommissioning.
- The Coos District cooperated with the Coos Watershed Association to complete one large in-stream wood placement project in Elk Creek and replaced three culverts on streams to improve adult and juvenile fish passage.
- The Coos District cooperated with Oregon Department of Fish and Wildlife to complete another in-stream wood placement project in Footlog Creek.
- Coos District continues to have voting board members on the Coos Watershed Association and the Tenmile Lakes Basin Partnership.



## LiDAR Use on Common School Forest Lands Managed by the Oregon Department of Forestry

LiDAR is a tool designed to provide high accuracy topographic data, but it provides much more than that. LiDAR stands for “Light Detection And Ranging” and the data is collected using a laser rangefinder mounted to an airplane with a global positioning system (GPS) receiver. Laser pulses reflect off whatever they strike first and return to the airplane. The amount of time that each pulse takes to return is measured and distances from the airplane to the surface are measured. In forested areas, the majority of “returns” are from the forest canopy. However, enough pulses still pass through the canopy to provide an adequate number of “returns” from the ground surface. The resulting dataset forms a “point cloud” of points with X-Y-Z coordinates. The point cloud is screened using algorithms to make a variety of products, usually digital elevation models (DEMs).

The LiDAR data is used to make three main products:

1. A “bare earth” DEM, which shows the ground surface.
2. A “highest hit” DEM, which shows trees and buildings and only shows the ground surface where there is bare ground, such as a road. Subtracting the bare earth elevation from the highest hit elevation can give a canopy height.
3. An “intensity” image, which provides information about the type of surface that the laser pulse reflected off.

Topographic data is an essential tool that ODF uses to manage forestland. LiDAR data is so much more accurate than the standard topographic data (USGS 1:24,000 quadrangles), that it allows a lot more



*Photo: Oregon Department of Forestry*

**A timber sale landing in the winter—Elliott State Forest**



work to be done in the office prior to field work. It does not necessarily replace field work, but it is a great tool to help focus the field work on where it is most needed. ODF currently uses LiDAR data in a variety of ways.

The bare earth DEM is used to:

- Lay out timber sales and logging access.
- Locate and design roads.
- Locate and design stream crossings.
- Locate the placement of landings.
- Determine yarding profiles.
- Locate streams and assess fish habitat.
- Identify steep slopes, inner gorges, and channels prone to landslides and erosion.
- Identify, assess, and mitigate or avoid landslide hazards and risk to waters of the state, fish habitat, and public safety.
- Give purchasers improved imagery of sale units (included in logging plans now)

The canopy data is used to:

- Produce preliminary volume estimates.
- Develop cruise design.
- Locate green tree retention placement.
- Implement stream buffers.
- Generate volume calculations for timber sale appraisals and reforestation seedling orders.

LiDAR data allows for more efficient and effective use of employee time. The time savings for using LiDAR alone could amount to from 5-30 percent, depending on the task. The ODF Astoria District estimated the cost benefits of using LiDAR at over \$60,000 for the FY 2009 Annual Operations Plan.

Direct cost savings to the agency include:

- More efficient use of planning time
- More efficient use of field time with less wasted effort
- More accurate measurement of topography, road grades, and timber stands
- More efficient design and implementation of harvest systems and roads

Indirect cost savings to the agency include:

- Recognition and avoidance or mitigation of landslide hazard and risk
- Improved road location and alignment
- Improved employee and public safety. LiDAR data enables em-



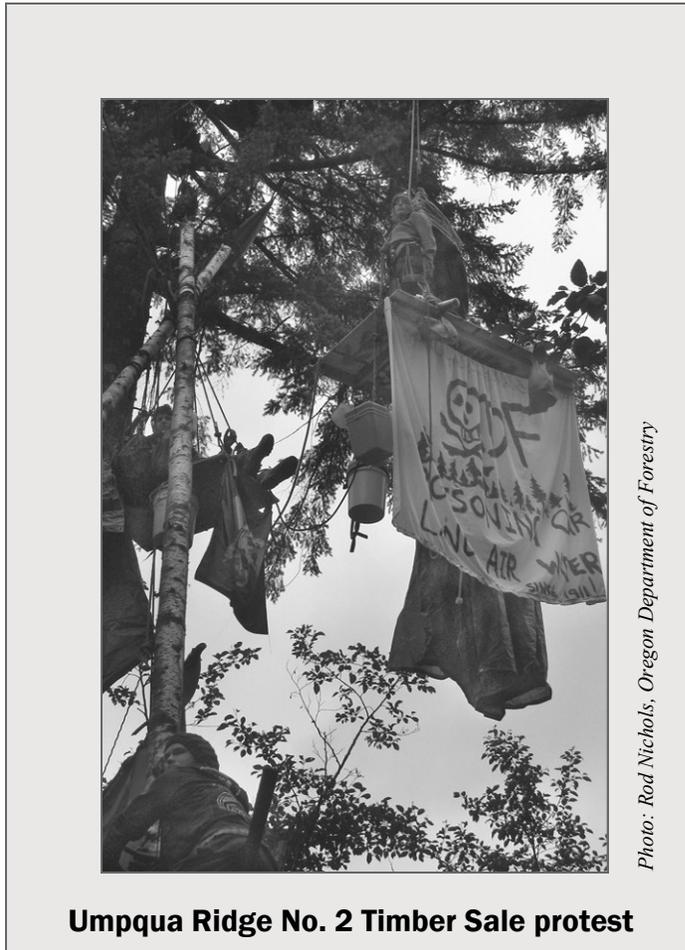
ployees to avoid cliffs, steep channels, and other hazards as they work across the landscape

- Avoided or reduced mitigation costs due to improved species management

The quality of LiDAR data and the methods for using it are improving all the time and many new uses are being developed.

## Protest of Umpcoos Ridge No. 2 Timber Sale

In early July 2009, contract loggers arrived on the Elliott State Forest to find the roads into their timber sale unit occupied by 50 to 100 protesters. Declaring a “Free State,” the Earth First! and Cascadia Rising Tide activists had taken several measures to block vehicle access to the Umpcoos Ridge No. 2 sale. Some attached themselves to the main gate with barrels of concrete. Others



**Umpqua Ridge No. 2 Timber Sale protest**

overturned a school bus and a van on the access roads and concreted themselves to the vehicles. A third group erected a log tripod in the road, perilously tied to the gate to prevent its opening, and climbed to the upper tiers. In trees alongside the road, yet more activists perched on limbs. As a further deterrent to entry, they had dug several deep trenches in the roads.





*Photo: Rod Nichols, Oregon Department of Forestry*

**Umpcoos Ridge No. 2 Timber Sale protest—Elliott State Forest**



*Photo: Rod Nichols, Oregon Department of Forestry*

**Umpcoos Ridge No. 2 Timber Sale protest—Elliott State Forest**



When news media arrived, the protesters announced the twofold aim of their occupation: to protect native forest that provides fish and wildlife habitat and help prevent global warming.

Faced with a criminal activity that was obstructing state business, the departments of Forestry and State Lands contacted the Oregon State Police and the Douglas County Sheriff's Office. The officers met with the protesters in person and posted signs, informing them that they needed to leave or face arrest the following day. At this point, many abandoned the protest. But to remove those that remained, the officers arrived the next morning with jackhammers, concrete saws and a leased boom. A laborious day of chipping concrete, sawing metal drums, and extracting tree and tripod sitters ensued. Paddy wagons transported the violators to the Douglas County jail in Roseburg.

Charged with interfering with an agricultural operation, the 22 arrested protesters faced \$1,000 fines or 120 hours of community service. In addition, the State of Oregon sought \$83,000 to cover the cost of the operation to remove them from the site. In the end, the court ordered 12 protesters to pay \$1,000 fines and assigned 10 others to community service. The enforcement agencies ultimately had to absorb the costs of reopening the sale site, and 15 forest workers lost a week's wages.



*Photo: Rod Nichols, Oregon Department of Forestry*

**Umpcoos Ridge No. 2 Timber Sale protest**



# Northwest and Southwest Oregon State Forests

*The lands managed under the Northwest and Southwest Oregon State Forests Management Plans include about 26,000 acres of Common School Forest Land, which represents about three percent of the total state forest land managed under these two state forest management plans.*

## Northwest and Southwest Oregon State Forests Management Plans

The BOF and SLB approved revisions to the 2001 Northwest and Southwest Forest Management Plans (NW and SW FMPs), and adopted the revised forest management plans in rule on April 22, 2010, after a 43-day public comment period. The revised forest management plans continue sustainable forest management, while providing a blended mix of benefits across environmental, social, and economic areas. The revision involves reducing the long-term goal for developing complex forests in the NW FMP, while allowing for greater economic returns through timber harvest. The NW FMP long-term goal for complex forest types was revised from 40-60 percent of the land-



Photo: Chris Friend, Oregon Department of Forestry

**Peninsula Trail in the Tillamook State Forest**



scape to 30-50 percent, with 20 percent of the acreage of these complex forest types expected to be developed within 20 years.

The revised 2010 forest management plans replace the proposed Western Oregon State Forests Habitat Conservation Plan with strategies for species of concern, consistent with BOF performance measures. In cooperation with the Oregon Department of Fish and Wildlife, species of concern strategies address fish and wildlife species that have been identified as being at risk.

The BOF requested a review of the ODF analyses for using the species of concern strategies in lieu of the proposed habitat conservation plan and decreasing the goals for older forest types on the landscape. The Institute of Natural Resources will complete the scientific review in the fall of 2010. The SLB directed ODF to manage the CSFL contingent upon two actions. First, that ODF provide results of the IMST review to the BOF and SLB prior to implementing changes; and, second, that the BOF make or direct any necessary changes based upon the IMST review.

The revisions to the NW and SW FMPs are expected to make available more opportunities for harvest on the three percent of CSFL in this part of the state.

Current district implementation plans are viable under the revised forest management plans. District implementation plans will be revised to incorporate new information and adjust the operating levels to align with the performance measures and specific targets for the north coast districts. The first on-the-ground effects of the revised plans for the north coast districts will likely be seen in the 2012 annual operation plan period and for the other districts by the 2013 annual operation plan period.

## Stand Level Inventory on all State Forests

The Stand Level Inventory (SLI) is a forest inventory developed by ODF, and is used on the entirety of ownerships managed by the State Forests Division. Field measured sampling occurs in a carefully selected representative portion of inventory stands. These inventory cruise stand results are used to extrapolate inventory information in a supervised way to stands which do not have field-measured data.



**Table 12. Stand Level Inventory Status of All Ownership Classes Effective June 2010**

<b>District</b>	<b>Total Stands</b>	<b>Measured Stands</b>	<b>Measured Stands (Percent)</b>	<b>BOFL</b>	<b>CSFL</b>
Astoria	1,654	791	48	1,635	65
Forest Grove	1,285	768	60	1,278	23
Tillamook	5,753	947	17	5,642	194
West Oregon	969	449	46	812	296
North Cascade	762	365	48	747	32
Western Lane	377	203	54	350	13
Southwest Oregon	310	171	55	175	135
Coos	2,138	1,335	62	287	1,995
Klamath-Lake	301	224	74	220	81
<b>Total:</b>	<b>13,549</b>	<b>5,253</b>	<b>38.8</b>	<b>11,146</b>	<b>2,834</b>

This provides site-specific information on trees, downed wood, and non-tree vegetation (herbs-shrubs-grasses) in the cruised stands, statistically derived information about all stands for forest modeling purposes, and the ability to aggregate the information to report district-and state-wide inventory totals for state forestlands.

Statewide, as of the end of June 2010, there are 13,549 SLI stands, 5,253 of which (38.8 percent) have field-based measurements. Stands are delineated along differences in general timber characteristics—



boundaries are drawn to group together areas with similar tree species, size and stocking. SLI boundaries often coincide with administrative boundaries, but individual stands may include more than one land ownership category such as BOFL and CSFL lands. Inventory reporting specific to ownership category is facilitated by integration of the SLI data with ownership information from GIS. Table 12 shows the total number of stands by ODF District, the number and percentage of stands with field-based measurements, the number of stands having one or more acre of BOFL, and the number of stands having one or more acre of CSFL.

Forest stands undergo continuous change over time due to timber growth, mortality, and harvest. The long-term goal for SLI is to maintain at least 50 percent of all stands with recent (with respect to change factors) field measured cruise information. In the past, ODF has conducted annual inventory cruising projects in order to acquire and maintain the needed measurements. During the period from July 2009 through June 2010, budget limitations resulted in the cancelation of an existing inventory contract and precluded any State Forests-funded new data acquisition projects. However, the Division did apply for and receive American Recovery and Reinvestment Act grant funding for a combined SLI and Swiss Needle Cast Assessment project for the Tillamook District. As part of work to assess forest health, the project includes work to measure and assess 147 forest stands comprising 10,498 acres that are of particular interest due to their susceptibility to, and impacts from, Swiss Needle Cast disease. The work on the personal service contract, valued at approximately \$100,000, began in February 2010 and will conclude in March 2011.

There are no CSFL acres in the project; however the SLI data collected is applicable to inventory efforts on Tillamook District CSFL acres – having value for use in extrapolating inventory data to CSFL SLI stands which do not have field-measured data.



*Photo: Oregon Department of Forestry*

**A complex, layered forest stand**



**Table 13. Timber Inventory Estimate for State Forests  
Common School Forest Lands, June 30, 2010**

<b>Total Net Scribner Board Foot Volumes (MBF)</b>											
<b>District</b>	<b>Acres</b>	<b>Douglas-fir</b>	<b>Cedar</b>	<b>True Fir</b>	<b>Hemlock</b>	<b>Pine</b>	<b>Spruce</b>	<b>Alder</b>	<b>Other</b>	<b>Total</b>	<b>Average MBF/Acre</b>
Astoria	1,945	21,109	358	586	8,528	0	2,756	4,355	124	37,815	19.4
Coos	86,683	2,132,001	17,304	1,156	206,761	264	11,842	116,720	64,406	2,550,455	29.4
Forest Grove	604	7,277	38	41	139	0	0	985	167	8,647	14.3
Klamath-Lake	6,825	54	479	13,828	0	29,542	0	11	69	43,982	6.4
North Cascade	919	22,112	39	51	748	0	0	971	1,081	25,002	27.2
Southwest Oregon	7,905	81,087	3,004	5,496	411	7,589	0	68	10,627	108,283	13.7
Tillamook	4,934	54,176	1,256	284	35,681	0	12,943	16,727	683	121,749	24.7
Western Lane	919 <sup>1</sup>	22,003	405	768	2,107	0	0	593	1,333	27,210	29.6
West Oregon	7,804	131,181	1,023	55	8,004	11	1,661	20,227	4,770	166,931	21.4
<b>Total:</b>	<b>118,537<sup>2</sup></b>	<b>2,471,000</b>	<b>23,905</b>	<b>22,266</b>	<b>262,380</b>	<b>37,406</b>	<b>29,202</b>	<b>160,657</b>	<b>83,259</b>	<b>3,090,076</b>	<b>26.1</b>

<sup>1</sup>Last year, DSL completed divestment of approximately 825 acres in the Western Lane District. That represents an approximate 47 percent decrease in the District's CSFL acres, whereas the total volume estimate decreased just 38 percent - from 43,857 MBF to 27,210 MBF. 2009's average MBF/acre was 25.1, much of the increase to 29.6 this year is attributable to the relatively higher volume per acre of the remaining lands.

<sup>2</sup>2009-reported net inventory acres was 118,790. Changes contributing to the difference include improvements in GIS data for ownership boundaries and roads, and forest land divestiture activity by DSL.



## Stand Level Inventory Timber Volume Estimate

Table 13 shows the SLI-based estimate of merchantable net board foot volume by species for CSFL lands as of June 30, 2010. The acres information is net of area in roads—other non-forested acres are not removed, but the volume estimate does reflect the effect of low or non-stocked areas outside of roads.

SLI data is updated annually, typically just prior to the end of June each year – in time for using the updated data for this report. Staffing reductions and workload reorganization combined this year to impact completion of the update work. The following is a synopsis of the update status and basis by District for the SLI-based timber inventory estimates in Table 13.

- **Astoria.** This year's update begun but not completed in time for this report; some GIS boundary information updated and used for this report; timber inventory information for this report obtained by growing last year's data forward using the inventory growth model; no operations updates (harvest, pre-commercial thinning, tree planting, etc.) included for the year.
- **Tillamook.** Most recent update completed in July 2008; timber inventory information for this report obtained by growing the most recent data forward using the inventory growth model; operations updates (harvest, pre-commercial thinning, tree planting, etc.) included for the period through June 2008 only.
- **Klamath-Lake.** This year's update not completed; last year's data grown forward and used for this report; no operations updates included for this year.
- **Forest Grove.** This year's update nearly completed; some temporary data placeholders used to allow use of this year's data for the reporting; updates for all recent operations completed.
- **Coos, North Cascade, Southwest Oregon, Western Lane and West Oregon.** This year's updates completed; updates for all recent operations completed.





# Appendix A



**Table A-1. Common School Forest Lands  
Managed by ODF the Oregon Department of Forestry  
by County**

<b>County</b>	<b>CSFL Acres</b>
BENTON	723
CLACKAMAS	113
CLATSOP	2,060
COLUMBIA	80
COOS	54,081
CURRY	1,352
DOUGLAS	34,526
JACKSON	2,062
JOSEPHINE	4,167
KLAMATH	6,827
LANE	907
LINCOLN	5,612
LINN	90
MARION	720
POLK	1,690
TILLAMOOK	5,584
WASHINGTON	250
YAMILL	80
<b>Total:</b>	<b>120,924</b>

Data effective 7/1/2010

Note: Report is based on legal acres, not GIS acres.







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