

Roseburg District Annual Program Summary and Monitoring Report

Fiscal Year 2011

**U.S. Department of Interior
Bureau of Land Management**



FY 2011



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

Document prepared by the Roseburg District Office

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ROSEBURG DISTRICT ANNUAL PROGRAM SUMMARY FISCAL YEAR 2011

Executive Summary

This document combines the Bureau of Land Management Roseburg District Annual Program Summary (APS) and Monitoring Report for fiscal year 2011. Both reports are required by the 1995 Roseburg District Record of Decision and Resource Management Plan (ROD/RMP). Although the 2008 ROD/RMPs for the western Oregon BLM districts were reinstated on March 31, 2011 in Douglas Timber Operators et al. v. Salazar-DOI, the accomplishments being reported are derived from projects that had been largely designed under the management direction, land use allocations and objectives of the 1995 ROD/RMP.

The APS addresses the accomplishments of the Roseburg District in such areas as forestry, recreation, restoration, fire, and other programs. It also provides information concerning the Roseburg District budget, timber receipt collections, and payments to Douglas County. The results of the fiscal year 2011 APS illustrate that the Roseburg District is implementing the Northwest Forest Plan. However, the ability to fully implement some programs or program elements, particularly timber harvest, over the past 16 years has been affected by factors such as the challenge of implementing the Survey and Manage standards and guidelines and other ongoing litigation.

The Monitoring Report compiles the results and findings of implementation monitoring for fiscal year 2011. The Monitoring Report is a separate document with a separate Executive Summary, though it follows the APS in this publication.

Although the APS provides only a very basic and brief description of the programs, resources and activities in which the Roseburg District is involved, the report gives the reader a sense of the enormous scope, complexity and diversity involved in management of the Roseburg District public lands and resources. The managers and employees of the Roseburg District take great pride in the accomplishments described in this report.

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Table 1. Resource Management Actions, Directions, and Accomplishments

RMP Resource Allocation or Management Practice or Activity	Fiscal Year 2011 Accomplishments	Cumulative Accomplishments 1995-2011 Timber 1996-2011 Others	Projected Decadal Practices ¹
Regeneration harvest (acres sold)	0	3,845	11,900
Commercial thinning/density management (acres sold)	1,017/445	8,487/6,969	800/1,700
Site preparation (acres)	0	2,642	8,400
Vegetation control, fire (acres)	0	0	-
Prescribed burning (hazard reduction acres) ²	512	Not reported	-
Prescribed burning (wildlife habitat and forage improvement acres) ²	409	3,938	-
Prescribed burning for ecosystem enhancement (acres) ²	70	Not reported	-
Plantation Maintenance/Animal damage control (acres)	580	20,498	8,300
Pre-commercial thinning (acres)	2,820	57,050	39,000
Brush field/hardwood conversion (acres)	0	0	150
Planting/ regular stock (acres)	0	6,029	2,900
Planting/ genetically selected (acres)	0	1,533	11,400
Fertilization (acres)	0	5,504	14,400
Pruning (acres)	0	9,266	4,600
New permanent road const. (miles ³)	6.19	55.86	65
Roads fully decommissioned/obliterated (miles ^{4 5})	1.0	57.75	-
Roads closed/ gated (miles ⁶)	.39	12.78	-
Open road density (per square mile ³)	4.59	4.59	-
Timber sale quantity sold (m board feet)	27,692	470,756	495,000
Noxious weed control, chemical (acres)	1193	12570	-
Noxious weed control, other (acres)	590	5071	-

(Footnotes)

- 1 These are the projected decadal (ten year) totals under the RMP. The cumulative accomplishments reflect 16 years of timber management practices, and 15 years for all other management actions.
- 2 The prescribed burns totaled 512 acres, all of which occurred within the wildland urban interface (reducing hazardous fuels). These acres are counted twice, as they also provide benefits to wildlife habitat and ecosystem enhancement.
- 3 Bureau managed lands only, but including roads rockered or constructed under reciprocal rights-of-way agreements.
- 4 Bureau managed lands only.
- 5 Reporting for FY2010 includes only roads fully decommissioned in key watersheds.
- 6 Roads closed to the general public, but retained for administrative or legal access.

Table 2. Roseburg Resource Management Plan, Summary of Non-Biological Resource or Land Use Management Actions, Directions and Accomplishments

RMP Resource Allocation or Management Practice	Activity Units	Fiscal Year 2011 Accomplishments	Accomplishments 1995 through 2011
Realty, land sales	(actions/acres)	0	2/199.14
Realty, land exchanges	(actions/acres acquired/ disposed)	0	1/765/143
Realty, R&PP leases/patents	(actions/acres)	0	2
Realty, road. Easements and rights-of-way acquired for public/agency use	(actions)	3	19
Realty, FLPMA road rights-of-way, permits or leases granted	(actions)	12	126
Realty, utility rights-of-way granted (linear/aerial)	(actions)	0	16
Realty, withdrawals completed	(actions/acres)	0	0
Realty, withdrawals revoked	(actions/acres)	0	0
Mineral/energy, total oil and gas leases	(actions/acres)	0	0
Mineral/energy, total other leases	(actions/acres)	0	0
Mining plans approved	(actions/acres)	0	1
Mining claims patented	(actions/acres)	0	0
Mineral material sites opened	(actions/acres)	0	0
Mineral material sites, closed	(actions/acres)	0	0
Recreation, maintained off highway vehicle trails	(units/miles)	0	0
Recreation, maintained hiking trails	(units/miles)	11/19	146/253
Recreation, maintained sites	(units/acres)	23/469	329/6715
Cultural resource inventories	(sites/acres)	29/1202	242/21274
Hazardous material sites	(incidents)	1	32

Introduction

This APS is a review of the programs on the Roseburg District Bureau of Land Management for the period of October 2010 through September 2011 (fiscal year 2011). It provides a broad overview of management activities and accomplishments for fiscal year 2011.

Implementation of the Northwest Forest Plan began in April 1994 with the signing of the Northwest Forest Plan Record of Decision. Subsequently, the Roseburg District began implementation of the ROD/RMP, which incorporates all aspects of the Northwest Forest Plan, in June 1995 with the signing of the ROD/RMP.

The BLM completed an RMP revision effort in December 2008. The Secretary of the Interior withdrew the 2008 RODs/RMPs in July, 2009 and the districts reverted to implementing the 1995 RMPs.

On March 31, 2011, the United States District Court for the District of Columbia vacated and remanded the Secretary of the Interior's decision to withdraw the 2008 RODs/RMPs (*Douglas Timber Operators et al. v. Salazar*) effectively returning the districts to the 2008 RMPs.

Plaintiffs in the *Pacific Rivers Council V. Shepard* litigation filed a partial motion for summary judgment in the U.S. District Court for the District of Oregon on Endangered Species Act (ESA) claims and requested the court to vacate and remand the 2008 RODs/RMPs. A magistrate judge issued findings and recommendations on September 29, 2011 and recommended granting the Plaintiffs motion for partial summary judgment on their ESA claim. The Court recommends setting aside the agency action, vacating the 2008 RODs and reinstating the Northwest Forest Plan as the appropriate remedy. The Court will review and rule on any objections prior to issuing a final order.

Given the current uncertainty surrounding planning in western Oregon, The Roseburg District has designed projects to conform to both the 2008 ROD/RMP and the 1995 ROD/RMP. Consequently, projects have been consistent with the goals and objectives in both the 1995 RMP and 2008 RMP.

Fiscal year 2011 represents the sixteenth fiscal year of implementation of the 1995 ROD/RMP.

There are 20 land use allocations and resource programs under the 1995 Roseburg District ROD/RMP. Not all land use allocations and resource programs are discussed individually in a detailed manner in this APS because of the overlap of programs and projects. To keep this summary concise, a detailed background of various land use allocations or resource programs is not provided in this text. Additional information can be found in the 1995 ROD/RMP and supporting Environmental Impact Statement, which are available at the Roseburg District Office. The 1995 ROD/RMP may also be found on the Roseburg District external internet site at <http://www.blm.gov/or/plans/wopr/exrmp/roseburg/index.html>.

The manner of reporting the activities differs among the various resource programs. Some resource programs lend themselves well to a statistical summary of activities while others are best summarized in short narratives. Further details concerning individual programs on the Roseburg District may be obtained by contacting the Roseburg District Office.

Budget

In fiscal year 2011, Roseburg District had total appropriations of \$18,777,000.

- Oregon & California Railroad Lands (O&C) = \$11,093,000, including:
 - Deferred Maintenance = \$200,000
- Forest Ecosystems Health & Recovery = \$260,000
- Timber Pipeline = \$475,000
- Recreation Pipeline = \$295,000
- Title II, Secure Rural Schools = \$2,141,000
- Management of Lands & Resources (MLR) = \$2,270,000 including:
 - Abandoned Mine Land Mitigation = \$70,000
 - Deferred Maintenance = \$1,517,000
- Fire Related Programs = \$522,000
- Central Hazardous Materials = \$521,000
- Federal Highways Project = \$1,200,000

The value of District Contracting/Services for fiscal year 2011 was approximately \$5,586,000. There were an average of 105 full-time employees during fiscal year 2011. An average of 19 term, temporary, or cooperative student employees were employed at various times throughout the year.

Appropriations for the five years 2007 through 2011:

2007	\$18,462,000
2008	\$18,305,000
2009	\$20,450,000
2010	\$18,334,000
2011	\$18,777,000

Land Use Allocations

There has been one change to land use allocations during fiscal year 2011, described in Plan Maintenance for 2011.

Aquatic Conservation Strategy Implementation

Riparian Reserves

Restoration projects, density management, culvert and road upgrades are described under the programs of Fisheries, Water and Soil, Forest Management and Timber Resources, and Road Maintenance.

Watershed Analyses

Watershed analyses were required by the Northwest Forest Plan (NFP) Record of Decision (ROD). The primary purpose of watershed analyses was to provide decision makers with information about the natural resources and human uses in an area. This information is utilized in National Environmental Policy Act (NEPA) documentation for specific projects and to facilitate compliance with the Endangered Species Act (ESA) and Clean Water Act (CWA) by providing additional information for consultation with other agencies.

Watershed analyses include:

- Analysis of at-risk fish species and stocks, their presence, habitat conditions and restoration needs;
- Descriptions of the landscape over time, including the impacts of humans, their role in shaping the landscape, and the effects of fire;
- The distribution and abundance of species and populations throughout the watershed; and
- Characterization of the geologic and hydrologic conditions.

This information was obtained from a variety of sources, including field inventory and observation, history books, agency records, old maps and survey records.

As of the end of fiscal year 2011, thirty-nine watershed analyses had been completed through at least the first iteration, encompassing nearly all of the lands of the Roseburg District. The Roseburg District manages small portions of watersheds, such as the East Fork Coquille and South Fork Coos, that are principally managed by adjacent administrative units. In such cases, the Roseburg District utilizes watershed analyses prepared by these adjacent administrative units. The analyses cover over 1,000,000 acres, including 425,000 acres of public land administered by the BLM.

Watershed Restoration Projects

The District completed a variety of restoration projects in fiscal year 2011 using County Payments Title II funds a variety of appropriated funds, and matching funds secured by partners. Work occurred on both private and BLM-managed lands, with the intent of restoring conditions across ownership boundaries. In most cases, projects on private lands were managed by one of the BLM’s partners, with some or all of the funding coming from the BLM. Table 3 lists the projects accomplished in 2011.

Table 3. Watershed Restoration Projects Accomplished on the Roseburg District in Fiscal Year 2011

Project Name	Funding Source	Year-End Status
<i>Projects managed by the BLM</i>		
Rader Wolf Stream Habitat Improvement—BLM-managed lands—phase 3	Title II ¹ & OWEB ²	Completed
Upper Smith River Restoration	Titel II & Fish & Wildlife ³	On-going
Thompson & Munns Creeks Habitat Improvement—BLM-managed lands	Title II	Completed
Jackson Creek Riparian Habitat Improvement	Fish & Wildlife & Title II	Completed
Rock Creek Restoration	Fish & Wildlife & NUHP Mitigation Funding ⁴	On-going
<i>Projects managed by the Partnership for the Umpqua Rivers</i>		
Thompson & Munns Creeks Habitat Improvement—private lands	Title II & OWEB	Completed
South Fork Deer Creek Restoration	Title II	Completed
Rader Wolf Stream Habitat Improvement—private lands—phase 3	Title II & OWEB and private in-kind	Completed
<i>Projects managed by the Elk Creek Watershed Council</i>		
Lees Creek Culvert Removal	Fish & Wildlife	Continued

¹Title II funds from the Secure Rural Schools and Community Self-Determination Act (Payments to Counties)

² Funding from the Oregon Watershed Enhancement Board to improve water quality and stream habitat

³ Funding for Fish & Wildlife Stewardship on O & C lands (6334)

⁴ Funding for mitigation of the North Umpqua Hydropower project. Funds administered by the Umpqua National Forest

As shown in Table 3, in 2011 the Roseburg District and its partners completed or initiated 9 projects designed to improve stream habitat and riparian vegetation, or restore access to aquatic habitat.

Watershed Councils and Soil and Water Conservation Districts

In 2011, the District continued its strong relationship with the Partnership for the Umpqua Rivers, Douglas Soil and Water Conservation District, Elk Creek Watershed Council, and the Smith River Watershed Council. Most of the District's lands are interspersed with privately-owned lands in a checkerboard pattern of alternating square mile sections. This ownership pattern encourages BLM to work with neighbors to accomplish meaningful watershed restoration.

The watershed councils and Soil and Water Conservation District serve as coordinating organizations, bringing many other partners together to work jointly on projects. Roseburg District employees attend all general watershed council meetings and many committee meetings. The Roseburg District contributes in two ways, by conducting projects on District lands that contribute to restoration goals in areas with multiple land owners, and by transferring funds to the watershed council for restoration projects. In return, the District not only gains many partners, but leverages money from other sources. The watershed councils and Soil and Water Conservation District have successfully applied for and received support from organizations such as the Oregon Watershed Enhancement Board, Natural Resource Conservation Service, Umpqua Fisherman's Derby, and in-kind donations from private landowners. Monies contributed by the Roseburg District often serve as matching funds needed for these grants.

Late-Successional Reserves and Assessments

Late-Successional Reserve Assessments, many of which were joint efforts between the US Forest Service and other BLM Districts, have been completed and reviewed by the Regional Ecosystem Office for Late-Successional Reserves RO 151, 222, 223, 251, 257, 259, 260, 261, 2663, 254, 265, 266 and 268. All mapped 1995 Late-Successional Reserves on the Roseburg District are covered by one of these assessments.

Fiscal year 2011 management activity within the Late-Successional Reserves included:

- 1,018 acres of pre-commercial thinning;
- 646 acres of density management; and
- 1 acre of salvage (including rights-of-way harvests)
- 281 acres of brushing

Total commercial density management in Late-Successional Reserves from 1995 through fiscal year 2011 equals 5,784 acres. Total salvage (including rights-of-way harvest) between 1995 and 2011 equals 293 acres.

Little River Adaptive Management Area

The Little River Adaptive Management Area is one of ten Adaptive Management Areas (AMAs) designated under the Northwest Forest Plan for ecosystem management innovation including community collaboration and management applications. The management emphasis of Little River AMA as set forth in the Northwest Forest Plan is the development and testing of approaches to the integration of intensive timber production with restoration and maintenance of high quality riparian habitat. Working with other agencies, organizations, and the public are other areas of learning.

In January 1997, the Roseburg District BLM and the Umpqua National Forest released a draft of the Little River AMA Plan. A requirement of the Northwest Forest Plan, the AMA document frames a direction for adaptive

management on the Federally-managed experimental area. Both Roseburg BLM and the Umpqua National Forest are currently managing the Little River AMA under the draft Adaptive Management Area plan and in accordance with the Northwest Forest Plan.

In 1998, the major landholders in the Cavitt Creek area (BLM, Umpqua National Forest, and Seneca Jones Timber Company) along with the Umpqua Basin Watershed Council (now Partnership for the Umpqua Rivers) initiated an effort to inventory and prioritize roads that are a high risk to aquatic resources and in need of restoration. This cooperative effort was intended to more effectively address water quality and fisheries concerns in areas with intermingled private and public lands. Surveys of 204 miles of roads were completed in February, 2001.

A total of five stream crossing culverts that restrict or impede fish passage were replaced in 2002. Three of these were accomplished by the BLM and two by Seneca Jones Timber Company.

The BLM continued the implementation of three projects within the Little River AMA during fiscal year 2011. Water quality monitoring continues to be a major emphasis for the Little River AMA. The monitoring program is an interagency effort that includes temperature stations, multi-parameter grab sample measurement by volunteers and the Glide School students. All water quality data will be linked to an interagency geographic information system (GIS).

Air Quality

All prescribed fire activities conformed to the Oregon Smoke Management and Visibility Plans. No intrusions occurred into designated areas as a result of prescribed burning on the District. There are no Class I airsheds within the District. Air quality standards for the District prescribed fire and fuels program are monitored and controlled by the Oregon Department of Forestry.

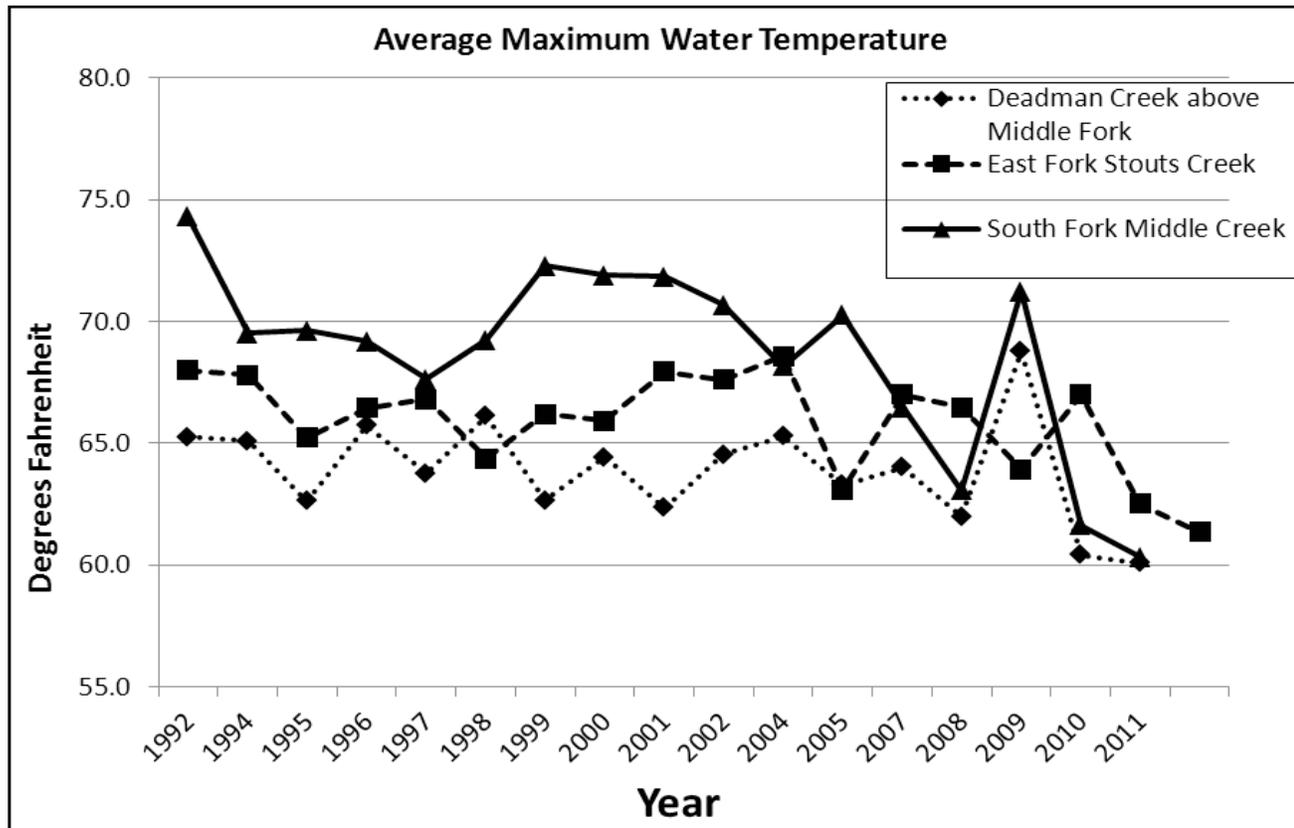
Water and Soils

Water temperature was monitored at 42 streams on the Roseburg District. The data will be used to track trends seen over time, update existing watershed analyses and water quality management plans, and is provided to DEQ for Total Maximum Daily Load (TMDL) development and assessment. One surprising trend seen on numerous streams throughout the District is a slight decrease in summer maximum stream temperatures. The graph below displays a portion of this information for several streams in the South River Field Office.

Stream water quality was monitored and published for the North Umpqua River Wild and Scenic Section in the U.S. Geological Survey (USGS) water-data report through an ongoing cooperative study with Douglas County Water Resources Survey, USGS, and the Umpqua National Forest.

Stream flow and water temperature was monitored at nine sites (an ongoing annual effort) in cooperation with the Douglas County Water Resources Department, USGS, Coos Bay District BLM, and the Umpqua National Forest. In total the cooperating agencies operate 21 stream gauges.

Figure 1. Maximum summer stream temperatures from 1992 through 2011 in three representative streams in the South River Resource Area.



Watershed activity information for fiscal year 1996-2011

- Operated 9 gauging stations.
- Cooperatively monitored water quality on the North Umpqua Wild and Scenic River;
- Completed several water rights applications with Oregon Water Resources;
- Installed photo plots in McComas Creek prior to riparian thinning actions, as part of a Western Oregon shade monitoring study.
- Surveyed the geomorphology in McComas Creek to document trends in channel change over time.
- Surveyed the geomorphology in Muns Creek, Little Wolf Creek, and Jackson Creek to monitor pre and post-project channel changes associated with in-stream large wood restoration projects.
- Surveyed channel geomorphology in Rice Creek to monitor pre and post-project channel changes associated with the replacement of a fish barrier culvert.
- Developed 5-year aquatic restoration plan in cooperation with Fisheries staff.

State-listed Clean Water Act 303d streams

The Roseburg District has 75 state-listed streams identified by the Oregon DEQ in its 2004/2006 integrated listing. Since this list was prepared, a TMDL for the Umpqua Basin has been approved. This TMDL will result in the removal of many of the streams presently listed as not attaining temperature standards from the Oregon DEQ 303d list.

Municipal Watersheds

There are 26 community water systems within the Roseburg District that encompass BLM-administered lands. The District has entered into memoranda of understanding with the cities of Drain, Riddle, and Canyonville. The objective of these agreements is to maintain the best water quality through implementation of Best Management Practices. A Special Land Use Permit has been issued to the City of Myrtle Creek for watershed protection which includes the city intake and an adjoining 190 acres of BLM-administered lands. There have been no reports of contamination or water quality violations from BLM-administered lands.

Best Management Practices

Best Management Practices (BMPs) are identified and required by the Clean Water Act as amended by the Water Quality Act of 1987. BMPs are defined as methods, measures, or practices designed to protect water quality or soil properties. BMPs are selected during the National Environmental Policy Act (NEPA) interdisciplinary process on a site specific basis to meet overall ecosystem management goals. The Roseburg District ROD/RMP lists BMPs for various projects or activities that may be considered during the design of a project. Monitoring of the ROD/RMP during 1996-2011 has shown that BMPs have been appropriately implemented with a high degree of success.

In an effort to further improve their effectiveness, BMP's for BLM Districts in Western Oregon were updated in 2011 (see Plan Maintenance for 2011). This update was done through a process that included the review and incorporation of recent scientific literature, review and incorporation of protective road practices from other agencies (including EPA, ODEQ, and ODF), and use of the results of past BMP monitoring efforts.

Wildlife Habitat

Green tree retention

The ROD/RMP management direction is to retain, at the time of regeneration harvest, an average of six to eight green conifers trees per acre in the General Forest Management Area and 12 to 18 green conifer trees per acre in the Connectivity/Diversity Blocks. The retained trees are to be distributed in variable patterns to contribute to stand diversity. The implementation of this management direction has been complex due to the many variables involved including ecological objectives and operational feasibility. Monitoring has shown no instances in which this ROD/RMP management direction was not implemented successfully.

Snag and snag recruitment

Approximately two snags per acre, on average, are being left on each regeneration harvest unit. The BLM attempts to retain as many existing snags as possible that are not safety hazards. In areas where adequate number of snags are not present or are not retained due to operational limitations, additional green trees are being reserved during project design and layout. The implementation of this management direction, similar to green tree retention, has been complex due to the many variables involved including ecological objectives and operational feasibility. Monitoring has shown no instances in which this ROD/RMP management direction was not successfully implemented.

Coarse woody debris retention and recruitment

In regeneration harvest units, ROD/RMP management direction specifies that 120 linear feet of Decay Class 1 and 2 logs per acre greater than or equal to 16 inches in diameter and minimum of 16 feet long will be left post harvest. Where this management direction cannot be met with existing coarse woody debris, merchantable material or felling breakage is used to make up the deficit. Monitoring has shown no instances in which this ROD/RMP management direction was not successfully implemented.

Connectivity/Diversity Blocks

There was no regeneration harvest in Connectivity/Diversity Blocks in fiscal year 2011. There were 201 acres of commercial thinning treatments applied in fiscal 2011. Cumulative totals for fiscal years 1995-2011 were: 684 acres of regeneration harvest; 3,342 acres of commercial thinning; and 83 acres of salvage (includes rights-of-way harvest). Management direction calls for maintaining 25 to 30 percent of each Connectivity/Diversity Block in late-successional forest at any point in time.

Special habitats

Special habitats are forested or non-forested habitat which contributes to overall biological diversity with the District. Special habitats may include: ponds, bogs, springs, seeps, marshes, swamps, dunes, meadows, balds, cliffs, salt licks, and mineral springs. Interdisciplinary teams identify special habitat areas and determine relevance for values protection or management on a case by case basis. Frequently, management action/direction for streams, wetlands, survey and manage species, and protection buffer species overlaps with these special habitats, so separate management is rarely necessary. For example, wetlands are frequently identified and protected as Riparian Reserves during project design and layout, therefore special habitat designation is unnecessary.

Late-Successional Reserve Habitat Improvement

Habitat improvement in Late-Successional Reserves for Fiscal Year 2011 consisted of 1,018 acres of density management in pre-commercial stands. To reduce fire hazard 281 acres were brushed. Active habitat improvement through commercial density management in stands less than 80 years old consisted of 604 acres in fiscal year 2011. Total commercial density management in Late-Successional Reserves from 1995 through fiscal year 2011 has been 5,784

Special Status Species, Wildlife

Threatened/Endangered Species

A large portion of the District wildlife program's resources are directed toward gathering and interpreting information to ensure compliance with the Endangered Species Act and the land use plan. Consultation under Section 7 of the Endangered Species Act occurs on all activities proposed within habitat of listed species. Consultation with the U.S. Fish and Wildlife Service (USFWS) was completed on planned timber sales and programmatic activities through fiscal year 2011.

Northern Spotted Owl

The Roseburg District currently contains 222,208 acres of suitable northern spotted owl (*Strix occidentalis caurina*) habitat. An additional 192,961 acres are considered “habitat - capable”. Approximately 150,000 acres are considered critical habitat under the Endangered Species Act (2008 Final Rule; August 13, 2008, 73 FR 47326), suitable for nesting, roosting, or foraging. One-hundred acre retention areas of the best available spotted owl habitat were established around all northern spotted owl activity centers that were identified as of January 1, 1994. A total of 126 northern spotted owl activity centers were established.

Revised Recovery Plan for the Northern Spotted Owl – On June 28, 2011 the USFWS approved the *Revised Recovery Plan for the Northern Spotted Owl (Strix occidentalis caurina)*. The recovery plan identifies the primary threats facing the northern spotted owl as current and past habitat loss due to harvest and catastrophic fire, and competition from the barred owl. It describes 34 recovery actions to address these threats. The main elements of the recovery strategy are:

- A network of owl conservation areas totaling nearly 6.4 million acres of federal land west of the Cascade Mountains’ crest in Washington, Oregon and California is identified. The goal of the conservation areas is to support a stable number of breeding pairs of northern spotted owls over time and allow for their movement across this network.
- On the east side of the Cascade crest, a pioneering approach to habitat management is described, based on strong recommendations from leading spotted owl experts and fire ecologists. The east side is dominated by a severe natural disturbance pattern so defining static conservation areas, like on the west side, is not useful, as these areas will inevitably and unpredictably be destroyed by fire or insect damage. The recommended approach calls for maintaining shifting spotted owl habitat patches in an entire landscape that is managed to maintain the building blocks needed for spotted owl habitat, such as large, older trees. As individual habitat patches are lost to fire or insect damage, we can quickly look to the neighboring areas to develop into our next habitat patch.
- To better understand the impact of barred owls on spotted owls and to start addressing this threat, the recovery plan calls for large-scale barred owl control experiments in key spotted owl areas.
- Further, the plan calls for substantially all older, complex forests to be maintained on federal lands west of the Cascade crest. This land is in addition to the designated conservation areas and is meant as an interim measure to help buffer the barred owl threat while we learn how to address it.
- The plan calls for the development of an inter-organizational work group responsible for overseeing implementation of the plan, including managing subgroups on barred owls and implementation of the eastside landscape management approach.
- The plan encourages incentives to non-federal landowners to contribute to northern spotted owl recovery through land management.

The recovery plan envisions recovery will be achieved – and the owl may be delisted – when there is a stable or increasing population, well-distributed across the owl's range, for at least 10 years and the threats from the barred owl have been reduced or eliminated.

Recovery plans are not regulatory documents enforceable by law. Rather, they provide guidance to bring about recovery through prescribed management actions and criteria to determine when recovery has been achieved, and are often influential in guiding the land-use decisions of federal and non-federal land managers.

Annual Northern Spotted Owl Monitoring – Annual monitoring is conducted to determine northern spotted owl nesting activity on the District. Detailed information is gathered on northern spotted owl sites on Federal land, as well as some sites on private land adjacent to Federal land. Much of the monitoring information is used to assist in evaluating the success of the Forest Plan for supporting viable northern spotted owl populations, a part of the larger monitoring plan for the Northwest Forest Plan (Lint, *et al.* 1999). Results of these efforts are reported in Table 4. Data may differ from data in previous years due to corrections and updates.

Table 4. Northern Spotted Owl Survey Results for Roseburg District.

Survey Year	Sites Surveyed ¹	No. Pairs Observed ²	Proportion of Sites ³
1996	332	145	59%
1997	303	125	58%
1998	304	131	60%
1999	282	123	63%
2000	257	128	63%
2001	258	139	66%
2002	270	144	64%
2003	270	136	65%
2004	278	145	62%
2005	293	120	54%
2006	310	111	54%
2007	325	113	50%
2008	339	121	48%
2009	340	118	42%
2010	363	120	36%
2011	360	97	40%

¹ Sites which had one or more visits.

² Includes only pairs. Does not include single birds or bird pairs of unknown status.

³ Proportion of sites surveyed with either a resident pair or resident single.

Marbled Murrelet

Surveys have been conducted for marbled murrelets (*Brachyramphus marmoratus*) on the Roseburg District since 1992. Of the 185,634 acres of public land within the zones of potential habitat for marbled murrelets 97,595 acres have been classified as suitable habitat. In fiscal year 2011, a total of 138 surveys were conducted, accounting for approximately 860 acres of suitable habitat. Surveys documented one new occupied marbled murrelet site and three areas where marbled murrelet presence, but not occupancy, was detected. Surveys at previously occupied marbled murrelet sites documented continued occupancy status at one site and undetermined status at another site.

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) was delisted by the USFWS in 2007 (July 9, 2007, 72 FR 37346), and is now considered a *Bureau Sensitive* species. There are 21 known bald eagle nest sites within the District,

all located within the Swiftwater Resource Area. Of the 21 bald eagle nest sites, 14 sites are located on public lands and seven are located on private lands, of which two sites are located adjacent to public lands. In 2011, two new sites were discovered on private lands and one new site discovered on public lands. Seven of the sites on public lands are located within the Bald Eagle Management Area.

All 20 nest sites were monitored in 2011, with 10 nest sites fledging a total of 14 young. One other site is suspected to have fledged at least one chick. Nest failure was confirmed at two sites, three sites were unoccupied, and the outcome at four sites was indeterminable. Six additional territories are suspected but nest trees/activity centers have not been located. Seasonal restrictions and distance buffers are applied to proposed activities in the vicinity of bald eagle nest sites. No winter roosts or concentration sites have been located on public lands within the District.

Peregrine Falcon

The peregrine falcon (*Falco peregrinus anatum*) was delisted in 1999 as a Federally-endangered species (August 25, 1999, 64 FR 46542), and is now considered a *Bureau Sensitive* species. In 2003, the USFWS established a nationwide monitoring plan for the peregrine falcon. Monitoring will be conducted five times, at three year intervals (2003, 2006, 2009, 2012, and 2015). In 2009, the Oregon Department of Fish and Wildlife (ODFW) began a monitoring effort coincident with the Federal effort.

One new peregrine site was discovered in 2011 in the Swiftwater Resource Area, increasing the total to 12 known nest sites within the boundaries of the Roseburg District. Four of the 12 sites are located on public lands. The remaining eight sites occur on private lands adjacent to public lands. All 12 sites were monitored in fiscal year 2011. Monitoring determined six of the sites fledged a total of 11 young. Of the remaining six sites, one site was unoccupied, two sites were occupied by a single adult (a pair was not confirmed), and the outcome at three sites was undetermined. Seasonal restrictions and distance buffers are applied to proposed activities in the vicinity of known peregrine falcon nest sites.

Other Species of Concern

This category includes other species which have received special tracking emphasis on the District.

The BLM Oregon/Washington State Director issued new criteria for designating Special Status Species in August 2007. The State Director's list includes Sensitive and Strategic species. Designation of species as either sensitive or strategic is based upon species rankings by the State of Oregon and The Nature Conservancy. Species designated as Sensitive are managed as Special Status Species. The Strategic category is used for species for which more information is needed to determine their status. Special protection and management of Strategic species is discretionary. Further information on Special Status Species designation can be found at <http://www.fs.fed.us/r6/sfpnw/issssp/agency-policy/>.

Townsend's Big-eared Bat

The Pacific Townsend's big-eared bat (*Corynorhinus townsendii*) is a former Federal Candidate species. It remains listed as a candidate species by the state of Oregon, is on list two of the Oregon Natural Heritage Program and is listed as a BLM Sensitive species for Oregon. In the summer of 1999 a maternity colony of Townsend's big-eared bats was located on the Roseburg District. Monitoring of this site was not conducted in 2011.

Special Status Species, Botany

Surveys, Monitoring, Consultation, and Restoration

The Roseburg District Special Status Species botanical list (as of January 2008) includes 88 species that are known or suspected to occur within the District. These consist of 24 fungi, 14 bryophytes, 10 lichens, and 40 vascular plants. In addition there are 25 fungi, 3 bryophyte, 7 lichen, and 3 vascular plant Strategic species known or suspected to occur within the District.

Pre-project evaluations for Special Status Species are conducted in compliance with ROD/RMP management direction prior to all habitat disturbing activities. Approximately 5,500 acres were surveyed in 2011, locating nine new special status plant sites. Species found included Wonder Woman sedge (*Carex gynodynamis*), Thompson's mistmaiden (*Romanzoffia thompsonii*), Oregon bensoniella (*Bensoniella oregano*), lichen species *Chaenotheca subroscida*, and *Lobaria linita*, and a moss associated with dung (*Tetraplodon mnioides*). Baseline fungi, lichen, and bryophyte inventories have been completed on approximately 2,100 acres in District Areas of Critical Environmental Concern (ACECs) and Research Natural Areas (RNAs).

Monitoring continued on four populations of the Federally-endangered rough popcorn flower (*Plagiobothrys hirtus*) established in cooperation with the Oregon Department of Agriculture. These populations were established in 1998, 1999, 2002, and 2006 on the North Bank Habitat Management Area ACEC. The 2002 planting is in marginal habitat that lacks adequate standing water in the spring. No rough popcorn flower plants were found at this site in 2005, 2006, and 2007. Fifteen plants were identified on the site in 2008, but none have been found since. The 2006 planting (Soggy Bottoms), near one of the two previously successful transplant sites, was created using plants provided by the Oregon Department of Agriculture and plants transplanted from the road ditch at the West Gate population of rough popcorn flower. Additional plants were moved from the road ditch to the Soggy Bottom rough popcorn flower site in 2007. Annual monitoring indicates high levels of survivorship and reproduction at this newest location. A restoration project in the Soggy Bottoms area to improve the water holding capacity of the site was implemented in 2010. Logs were placed and willows were planted in incised water channels to slow flow and allow for soil deposition. In addition, noxious weed species were manually removed in all of the rough popcorn flower sites within the North Bank Habitat Management Area.

Conservation Strategies for the Umpqua mariposa lily (*Calochortus umpquaensis*), crinite mariposa lily (*Calochortus coxii*), and tall bugbane (*Cimicifuga elata*) have been completed since implementation of the ROD/RMP. Conservation Agreements with the USFWS were completed in 1996 for Umpqua mariposa lily and in 2004 for crinite mariposa lily. An interagency Conservation Agreement between the USFWS, the U.S. Forest Service (USFS), and the Roseburg, Eugene, and Medford Districts of the BLM, was completed in 2006 for wayside aster (*Eucephalus vialis*).

A land acquisition of approximately 39 acres was completed at the end of fiscal year 2001 to secure habitat for the Umpqua mariposa lily (*Calochortus umpquaensis*). In 2011, small diameter trees were thinned out on 14 acres at the site of the Ace Williams population in Section 27, T. 27 S., R. 3 W., Willamette meridian to provide more open growing conditions/ The thinned material was piled and will be disposed of by burning in fiscal year 2012.

Monitoring of six populations of Federally-threatened Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*) located on BLM-administered lands in the Roseburg District continues using transects established in 2003,

2004, and 2005. In April 2006, the BLM Roseburg District, USFWS, and the Umpqua National Forest completed the “Programmatic Conservation Agreement for Kincaid’s Lupine in Douglas County” (BLM, USFWS, and USFS 2006). The agreement formally documents the intent of the parties to protect, conserve, and contribute to recovery of the species by implementing certain management actions for Kincaid’s lupine and its habitat on Federal lands within Douglas County. As specified in the agreement, a Management Plan for Kincaid’s Lupine in Douglas County, Oregon was completed in 2008, which describes specific management activities within the Federally-managed populations of Kincaid’s lupine within Douglas County. As a consequence of the Conservation Agreement, when critical habitat for Kincaid’s lupine was designated on October 31, 2006, no critical habitat units were designated in Douglas County. The BLM thinned out small trees and shrubs within several Kincaid’s lupine sites in 2010 as prescribed by the Management Plan. Slash piles were burned in the fall of 2010. Additional monitoring plots were established in the largest population to monitor effects of the actions.

The Roseburg District participates in a native plant materials development program to produce native seed mixes and straw for a variety of restoration projects. Four native perennial grasses are currently grown under contract. The seed is used for road reclamation and erosion control projects on the District. Seed from several native grass and forbs species collected from the North Bank Habitat Management Area in 2006 are being grown out for eventual use for restoration in the North Bank Habitat Management Area.

Fisheries

District Support

During fiscal year 2011, the Roseburg District Fisheries Program continued implementing the Northwest Forest Plan and the associated Aquatic Conservation Strategy. In fiscal year 2011, the District Fisheries program was staffed with three full-time fisheries biologists. Major duties were divided among the following workloads: District support (i.e. NEPA analysis), watershed restoration, data collection and monitoring, outreach activities, and Endangered Species Act (ESA)/Magnuson-Stevens Act consultation. Additionally, the District has been very active in providing fisheries expertise to the Partnership for the Umpqua Rivers and its Technical Advisory Committee. This involvement represents a portion of the BLM’s continued support of the State’s Plan for Salmon and Watersheds.

Endangered Species Act & Magnuson Stevens Act Consultation

The Roseburg District lies within the Oregon Coast Evolutionarily Significant Unit for coho salmon. Oregon Coast coho salmon were listed under the ESA in February, 2008, requiring the BLM to enter into ESA Section 7 consultation for all discretionary Federal actions that may affect coho salmon and designated critical habitat. ESA Section 7 consultation for aquatic restoration projects, as well as several categories of annual, routine activities, such as road maintenance, campground and trail maintenance, etc. was completed through use of regional programmatic consultation documents.

In fiscal year 2011, all timber sales consisted of relatively light-touch commercial thinning or density management thinning actions, and were designed to have no effect on coho salmon or their habitat.

In addition to ESA consultation, consultation under the Magnuson-Stevens Fishery Management Act (MSA) continued to be required for any project that would adversely affect habitat for coho or Chinook salmon. Based upon protections provided in the Northwest Forest Plan, application of specific project design criteria that

reduce or eliminate risks of aquatic impacts, and the light-touch nature of the actions - none of the projects analyzed locally on the Roseburg District would have an adverse impact on habitat for these species, and consultation with the National Marine Fisheries Service (NMFS) under the MSA was not required for projects planned in fiscal year 2011.

Watershed Restoration

In-stream – The Roseburg District continued its trend of substantial aquatic restoration accomplishments on BLM-managed lands in fiscal year 2011. Six in-stream large wood restoration projects were implemented by BLM staff during the summer of fiscal year 2011. The projects placed approximately 961 logs into roughly 10 miles of coho-bearing streams to improve habitat complexity and channel stability. Projects were completed in Rock Creek, South Fork Smith River, Wolf Creek, Muns Creek, Thompson Creek, and Chasm Creek. The Roseburg District also contributed funding and technical expertise to several other restoration projects led by the Partnership for the Umpqua Rivers. Fisheries biologists also started planning and preparing grant applications for large wood restoration projects in several streams planned for implementation in 2012 and 2013.

Fish Passage – Two barrier culverts were replaced with stream simulation culverts on streams in the South River Resource Area. One large barrier culvert was replaced in Rice Creek, restoring access for coho salmon and other species to roughly one mile of historic fish-bearing habitat, and maintaining important road infrastructure. The other culvert was located on an unnamed tributary to Boulder Creek, in the upper portion of the Middle Fork Coquille River watershed, and its replacement restored unimpeded access to resident cutthroat trout.

Data Collection and Monitoring

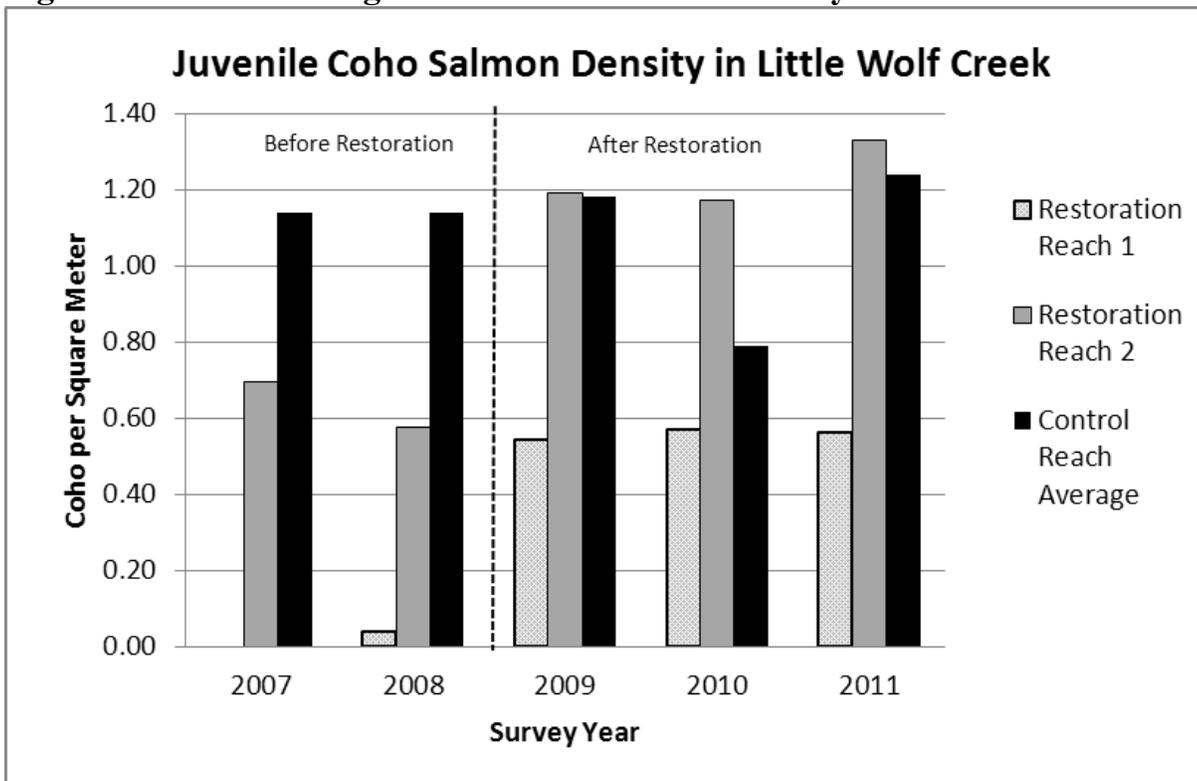
Restoration Project Monitoring – Several large in-stream restoration projects were monitored using a variety of methods that included pre and post-project photo-points, high definition channel surveys using an engineering total station, and evaluation of structure function and stability during high flow events. This monitoring was carried out on more than 15 miles of stream. Data gathered was used to assess effects of stream restoration projects on local habitat conditions, refine future restoration techniques, and better market BLM restoration efforts.

A large-scale restoration effectiveness monitoring project continued in Wolf Creek, a 23,000 acre sub-watershed in which extensive restorative work was carried out in the summers of 2008 and 2009. Monitoring efforts in 2011 focused on post-restoration data collection for evaluating habitat conditions in restored areas following two or three complete winter/spring (i.e. high flow) seasons. In addition, aquatic habitat was monitored in reaches where no restorative work had been completed. These areas will be used as controls, and serve as a valuable tool when comparing habitat changes over time.

Fish Distribution Surveys – Nine streams were assessed using mask & snorkel, and/or electro-fishing methods to determine the extent of juvenile fish distribution and species present. These streams were located in Curtin Creek (Myrtle Creek watershed), Wolf Creek (Little River watershed), and Andrews Creek (Elk Creek watershed). These methods assist biologists in determining exact fish distributions and general abundances, which are important components of virtually all project-specific fisheries reports, Watershed Analyses, and ESA and MSA consultations.

Fish Abundance Surveys –Snorkel surveys were used to assess fish populations in seven separate stream reaches. These surveys are done annually, to determine general population trends or specific fish responses in association with habitat restoration projects, with the intent of more accurately estimating the number of juvenile fish present in a given stream segment. The surveys will be repeated in future years to help gauge the effectiveness of in-stream restoration treatments, and to refine restoration techniques over time. An example of this information is shown in the graph below.

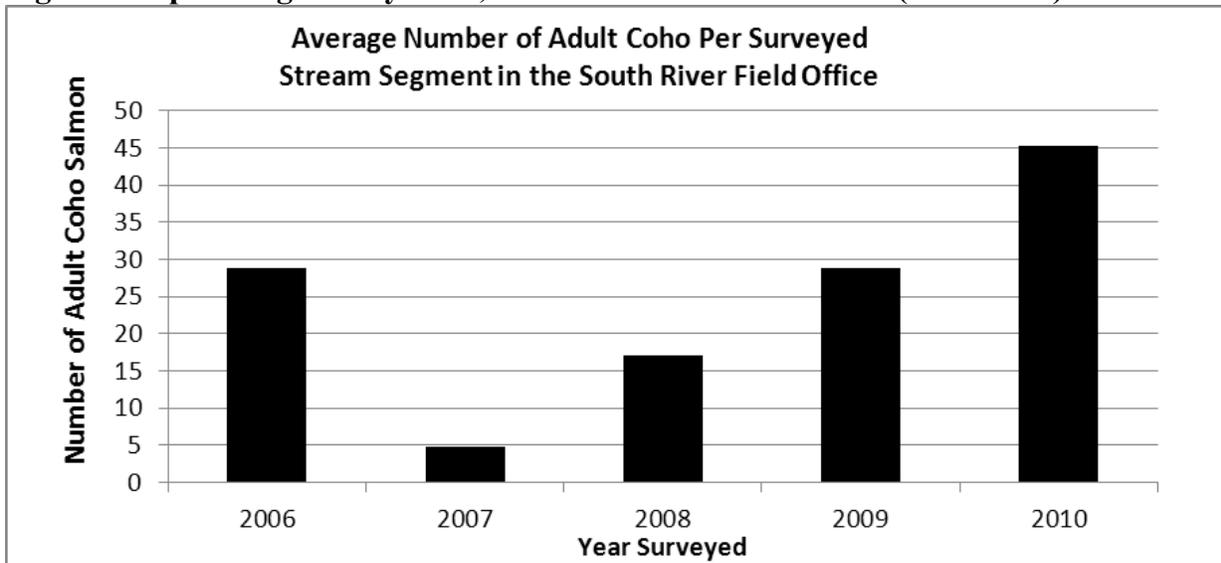
Figure 2. Juvenile Oregon Coast coho salmon Density in Little Wolf Creek



The graph illustrates the change in summertime juvenile coho salmon density in Little Wolf Creek before and after restoration treatments. This data, which shows increasing fish densities in the restored reaches and relatively static fish densities in the control reaches (where there was no restoration work done), suggests that restoration treatments are leading to an increase in coho density in Little Wolf Creek.

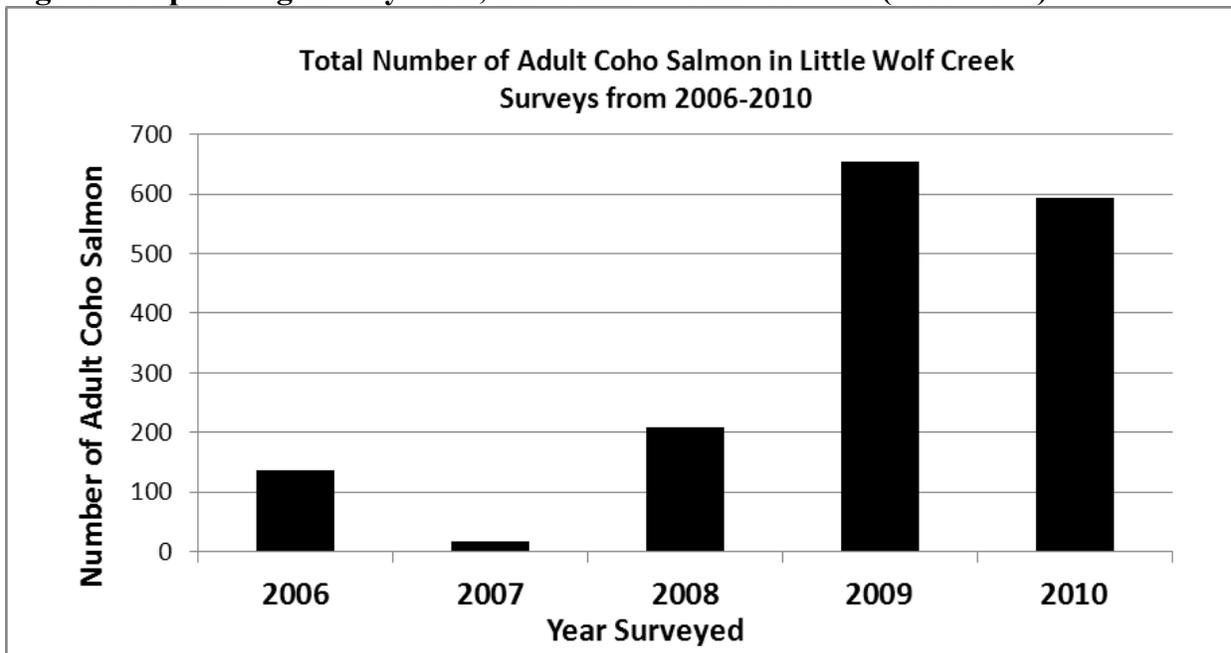
Spawning Surveys – Ten stream reaches were surveyed each week during the coho spawning season by Roseburg District fisheries personnel. Over time, this information can be used to evaluate population trends of returning adult coho salmon, and will also contribute to overall restoration project planning and effectiveness monitoring. The graphs below display trends observed over the last several years.

Figure 3. Spawning Survey Data, South River Resource Area (2006-2010)



Data collected during spawning surveys in the South River Field Office indicates that the number of adult coho returning to these stream segments has increased steadily over the last several years.

Figure 4. Spawning Survey Data, Swiftwater Resource Area (2006-2010)



Data collected in the Swiftwater Field Office shows a similar trend to the one seen in the South River Field Office. The number of adult coho returning to these stream segments has been increasing over the last several years. These increased numbers are likely a result of improved ocean conditions, which leads to greater survival of coho salmon overall.

Outreach and Community Activities

District fisheries and hydrology personnel continued participation in several District programs designed to educate local school students on fisheries and watershed issues. Aquatic staff volunteered their time and presented information at the OSU Extension Forestry Tour, Eastwood Elementary School's Outdoor Days, Camp Myrtlewood, Douglas High School, and Glide Middle School. Staff also participated on the National Fishing Week fishing derby steering committee, and in the Free Fishing Day event held at Cooper Creek Reservoir in Sutherlin.

Other community involvement included participation on the steering committee for the Umpqua Fishery Enhancement Derby, and working with the Oregon Youth Conservation Corps (OYCC) and Northwest Youth Conservation Corps (NWYCC) crews to introduce them to the techniques used in aquatic restoration, stream channel monitoring, and biological monitoring activities.

Special Areas

The Roseburg District has 11 special areas that total approximately 12,227 acres, including the Callahan Meadows Area of Critical Environmental Concern which was designated through the 2008 Resource Management Plan/Record of Decision (Western Oregon Planning Revision). Since publication of the ROD/RMP in 1995, defensibility monitoring has been conducted annually on all Areas of Critical Environmental Concern/Research Natural Areas (ACEC/RNA) and will continue in fiscal year 2012.

The BLM treated noxious weeds on the North Bank Habitat Management Area/ACEC including: Himalayan blackberry, English hawthorn, and diffuse knapweed. Broadcast burning was applied to control Medusahead wildrye.

In August of 2011, a section of the North Umpqua Wild & Scenic River/ACEC was rafted, with the objective of manually removing false brome growing in areas along the river bank.

Permanent vegetation monitoring plots have been established and baseline data collected in the North Myrtle, Red Ponds, Beatty Creek, Myrtle Island, Bushnell-Irwin Rocks, and Bear Gulch ACECs/RNAs. This information is used to characterize existing vegetation and to monitor long-term vegetation changes. The data was entered into a regional database for vegetation occurring within Research Natural Areas throughout the Pacific Northwest. This database is maintained by the Pacific Northwest Research Station, USFS, in Corvallis, Oregon.

Port-Orford-Cedar

Port-Orford-cedar trees, especially those growing adjacent to roads and streams, can become infected with a water mold, *Phytophthora lateralis* (PL). Mud carrying this water mold, dropped from vehicles, may disperse into ditches and water courses crossing roads. Port-Orford-cedar growing in the vicinity can be exposed, become infected, and eventually die.

The Roseburg District is working to prevent introduction of the disease into watersheds that presently contain healthy Port-Orford-cedar. A series of efforts, such as seasonal-use restrictions on some roads and prohibiting activities such as bough collecting during the rainy season, are on-going mitigation activities.

North Umpqua Wild and Scenic River

Wild and Scenic River Managed: North Umpqua Wild & Scenic River
 Length: 8.4 miles on BLM lands. (33.8 miles total)
 Designation Act/Date: Omnibus Oregon Wild & Scenic Rivers Act of 1988
 Outstandingly Remarkable Values: Fish, Water, Recreation, Scenery and Cultural Resources

Table 5. Visitor Use for Boating on the North Umpqua River

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Private Boating Visits	3,378	3,354	3,614	4,511	4,229	3,766	3,484	3,288	3,518	3,400	2,395
Commercial Boating	1,704	2,102	2,384	2,125	2,130	2,344	1,982	2,104	1,706	1,802	1,835
Boating on BLM Section	420	*	*	*	523	581	457	539	560	534	381

*No data collected

Cultural Resources

In fiscal year 2011, the cultural resources program accomplished work under the two major directives of the National Historic Preservation Act. Compliance inventory and evaluation work was accomplished in support of the timber, lands, wildlife, and recreation programs under the authority of Section 106. Cultural resource program initiatives, including evaluations and public projects, were accomplished under Section 110. Four archaeological sites were evaluated, 25 sites were monitored and over 1,200 acres were inventoried.

Public projects included participation in the School Forestry Tour and Creek Week hosted by Safe Place for Kids. Slightly over 200 people, mostly elementary school students, attended these programs.

Visual Resources

Visual Resource Management (VRM) analysis occurred in several VRM Class IV areas but none within Class I, II or III. Analysis was documented in each project's NEPA analysis.

Rural Interface Areas

No activity occurred within the rural interface areas. For information on fuels reduction work within the Wildland Urban Interface (WUI), see the Fire and Fuels Management section, Table 13.

Socioeconomic

Payments in Lieu of Taxes were made in fiscal year 2011 as directed in current legislation. In addition, O&C Payments and Coos Bay Wagon Road (CBWR) Payments were made because the program was reauthorized in fiscal year 2008 (*Secure Rural Schools and Community Self Determination Act of 2000*, as amended by the *Emergency Economic Stabilization Act of 2008, H.R. 1424, Sec. 601*).

Monetary Payments

The Bureau of Land Management contributes financially to the local economy in a variety of ways. One of these ways is through financial payments that include Payments in Lieu of Taxes, O&C Payments, and Coos Bay Wagon Road Payments. Payments of each type were made in fiscal year 2011 as directed in current legislation. The specific amounts paid to the counties under each revenue sharing program are displayed in Table 6.

A description of each type of payment program follows.

Payments in Lieu of Taxes

"Payments in Lieu of Taxes" (or PILT) are Federal payments made annually to local governments that help offset losses in property taxes due to nontaxable Federal lands within their boundaries. The key law which implement the payments is Public Law 94-565, dated October 20, 1976. This law was rewritten and amended by Public Law 97-258 on September 13, 1982 and codified as Chapter 69, Title 31 of the United States Code. The Law recognizes that the inability of local governments to collect property taxes on Federally-owned land can create a financial impact.

PILT payments help local governments carry out such vital services as firefighting and police protection, construction of public schools and roads, and search-and-rescue operations. These payments are one of the ways in which the Federal government can fulfill its role of being a good neighbor to local communities. This is especially important for the BLM, which manages more public land than any other federal agency. Fiscal year 2011 PILT payments to Douglas County were \$522,566 based upon 1,676,191 federal acres (including lands managed by the BLM, Forest Service, National Park Service) within Douglas County boundaries (www.doi.gov/pilt).

Payments to Counties

Since 2001 payments have been made to counties under "The Secure Rural Schools and Community Self-Determination Act of 2000." The purpose of the act was "To restore stability and predictability to the annual payments made to States and counties containing National Forest System lands and public domain lands managed by the BLM for use by the counties for the benefit of public schools, roads and other purposes." This legislation expired on September 30, 2007. The U.S. Congress failed to act on an extension of this legislation in 2008. However, shortly after the beginning of fiscal year 2009, the program was reauthorized for four years as part of HR 1424. Both the fiscal year 2008 and 2009 payments were made in 2009. The 2008 payment was available to spend in 2009, the 2009 payment in 2010, and the 2010 payment in 2011.

Counties can either elect to receive the standard O&C (Oregon and California Railroad lands) and CBWR (Coos Bay Wagon Road Lands) payment as calculated under the Act of August 28, 1937 or the Act of May 24, 1939, or they can elect to receive an amount based on historical payments, as determined under HR 1424. All counties in the Roseburg District chose the latter option for the fiscal year 2008, 2009, and 2010 payments as they have done in all years from 2001 through 2007.

Titles I, II, and III of the legislation describe how the funds can be used. Counties retain Title I and III payments. Title I payments are split between education and general county expenses such as road maintenance and law enforcement. Title III payments can fund a limited number of activities, including wildfire suppression and prevention, and search and rescue. Payments for all eligible counties in Oregon in fiscal year 2011 are shown in Table 6.

Table 6. Secure Rural Schools Payments to Counties Dispersed in Fiscal Year 2011

County	Title I Paid to County	Title II Retained by BLM	Title III Paid to County	Grand Total
Benton	\$2,024,197	\$190,513	\$166,699	\$2,381,408
Clackamas	\$3,997,969	\$376,279	\$329,245	\$4,703,493
Columbia	\$1,483,931	\$139,664	\$122,206	\$1,745,801
Coos	\$4,250,093	\$750,016	\$0	\$5,000,110
Coos (CBWR)	\$532,081	\$93,897	\$0	\$625,978
Curry	\$2,629,295	\$247,463	\$216,530	\$3,093,288
Douglas	\$18,044,887	\$1,698,342	\$1,486,050	\$21,229,279
Douglas (CBWR)	\$96,188	\$9,053	\$7,921	\$113,162
Jackson	\$11,287,959	\$1,062,396	\$929,597	\$13,279,952
Josephine	\$8,701,886	\$819,001	\$716,626	\$10,237,513
Klamath	\$1,685,630	\$297,464	\$0	\$1,983,094
Lane	\$10,999,817	\$1,035,277	\$905,867	\$12,940,962
Lincoln	\$259,328	\$39,662	\$6,102	\$305,091
Linn	\$1,901,737	\$178,987	\$156,614	\$2,237,337
Marion	\$1,051,718	\$98,985	\$86,612	\$1,237,315
Multnomah	\$785,187	\$73,900	\$64,662	\$923,749
Polk	\$1,555,966	\$146,444	\$128,138	\$1,830,549
Tillamook	\$403,399	\$71,188	\$0	\$474,587
Washington	\$453,824	\$80,087	\$0	\$533,910
Yamhill	\$518,655	\$48,815	\$42,713	\$610,183
Totals	\$72,663,747	\$7,457,433	\$5,365,581	\$85,486,761
		CBWR	\$739,139.87	
		O&C	\$84,747,621.02	
		Total	\$85,486,760.89	

Title II payments are reserved by the counties in a special account in the Treasury of the United States for funding projects providing protection, restoration and enhancement of fish and wildlife habitat, and other natural resource objectives as outlined in HR 1424. The BLM is directed to obligate these funds for projects selected by local Resource Advisory Committees (RACs) and approved by the Secretary of the Interior or his designee.

In September, 2011, the Roseburg District Resource Advisory Committee met and recommended 13 projects for funding with the 2011 payment. Implementation of these projects will begin in 2011.

Management Actions/Directions

The direction of BLM management is to support and assist the State of Oregon Economic Development Department's efforts to help rural, resource-based communities develop and implement alternative economic strategies as a partial substitute for declining timber-based economies. Aid and support includes:

- Increased coordination with state and local governments and citizens to prioritize BLM management and development activities.
- Recreation development and other activities identified by BLM and the involved communities as benefiting identified economic strategies.
- Improved wildlife and fish habitat to enhance hunting and fishing opportunities and to increase the economic returns generated by these activities.

- Improved or developed recreation sites, areas, trails, and Back Country Byways that can play a role in enhancing tourism activity within the District (see Recreation).

Environmental Justice

Executive Order 12898 of February 11, 1994, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” directs all Federal agencies to “...make achieving environmental justice part of its mission by identifying and addressing ...disproportionately high and adverse human health or environmental effects of its programs, policies and activities.”

New projects with possible effects on minority populations and/or low-income populations will incorporate an analysis of Environmental Justice impacts to ensure any disproportionately high and adverse human health or environmental effects are identified, and reduced to acceptable levels if possible.

Recreation

Recreation Management Areas (RMAs):

Swiftwater Resource Area

Swiftwater Extensive RMA - 219,243 acres

North Umpqua River Special RMA - 1,722 acres

Umpqua River Special RMA - 2,240 acres

South River Resource Area

South River Extensive RMA - 200,673 acres

Cow Creek Special RMA - 1,710 acres

There have been several public land tenure changes by acquisition and by disposal. Small acreage differences exist today from the above table that should be accounted for in the next RMP planning process. The RMA categories have remained the same.

Visitor Use

Recreation visits to Roseburg District BLM lands in fiscal year 2011 were estimated to be 989,959 visits. This represents an increase of one percent from 2010 figures, compared to a historical annual increase of three percent.

Recreation Trails Managed

Eleven trails totaling 19.0 miles. Total trail system including campground spurs: 21 miles.

Permits Issued/Fees Collected

User fees at seven campgrounds and three pavilions remained unchanged from 2010 although fee increases had been proposed at several sites, and a new fee was to be instituted at Scaredman Campground. Without a USFS/BLM Resource Advisory Committee, however, it was the third consecutive year that fee changes could not be approved and implemented.

Recreation Use Permits (RUPs) issued for camping at BLM campgrounds and for pavilion rentals totaled 3,584 in fiscal year 2011, compared to 3,657 in FY 2010, and 3,515 in FY 2009. Combined fees collected from all recreation revenues (RUPS & Special Rec. Permits) totaled \$ 94,050 compared to \$87,514.00 in FY 2010, and \$93,605.00 in FY 2009. Firewood collections brought in an additional \$10,480 in FY 2011 compared to \$8,257.00 in 2010. .

Special Recreation Permits (SRPs) managed:

- Eight commercial rafting outfitter guide SRPs and ten commercial fishing outfitter guide SRPs were managed on the North Umpqua River through a cooperative management agreement with the Umpqua National Forest,
- Three commercial mountain biking outfitter guide permits were managed on the North Umpqua Trail through a cooperative agreement with the Umpqua National Forest,
- One big-game outfitter hunting guide SRP was managed by Roseburg BLM.
- One joint group SRP was issued for Cycle Oregon by four BLM Districts.
- Three big-game outfitter hunting guide SRPs were jointly issued with the Medford District BLM.

Off-highway Vehicle Designations Managed:

Limited: 422,464 acres
Closed: 3,124 acres
Open: 0 acres

Over the past few years, issues and concerns have been raised by the public concerning the proliferation of new roads on public lands, illegally created by motorcycle, all-terrain vehicle and off-highway vehicle operators. This illegal use has been verified by BLM specialists and law enforcement officers. After illegal establishment of a new route, these roads and trails become part of the “existing roads and trails” system, allowing for unintended route proliferation, the extent of which is unknown. Private landowners and timber companies have approached BLM about gating public access into areas where off-highway vehicle damage and abuse to seedlings, gates and roads has been increasing.

Legitimate off-highway vehicle use is acknowledged as an accepted recreational activity, but controversy and impacts to public and private resources have grown to a point of management concern for action. BLM management is addressing the need for redesignation of lands available for off-highway vehicle use from “limited to existing roads and trails” to “limited to designated roads and trails.” This requires a baseline inventory of all roads that are open to motorized use, which would improve law enforcement efforts in citing violators. An Off-Highway Vehicle interdisciplinary team has proposed development of a Comprehensive Travel and Transportation Management Plan beginning in fiscal year 2012.

At the same time, off-highway vehicle clubs and user groups have partnered with BLM to promote the legal rights of riding and enjoying public lands. Clubs have sponsored organized rides, conducted clean-up activities, conducted trail inventories on BLM lands, and encouraged through their membership responsible riding on all lands.

Partnerships and Volunteer Work Managed

One hundred twenty individuals or groups volunteered for the Roseburg District BLM in various programs, including projects completed by thirty campground hosts and many individuals. Organizations volunteering their time included Phoenix School students, Northwest Youth Corps, Oregon Youth Conservation Corps,

Riddle High School students, Jefferson Conservation Corps, South Umpqua High School students, Umpqua Community College students, an Eagle Scout. Additional services were provided by the Douglas County inmate, juvenile and forestry crews, and a North Bank Habitat Management Area caretaker. All combined a total of 47,363 hours of service were provided in 2011 with a value of \$874,794*, compared to a total of 53,640 hours in 2010, for a value of \$1,118,394, 44,768 hours in 2009 and 38,018 hours in 2008. In 2011, hosted workers (OYCC, NYC and county crews) contributed 15,722 hours for a value of \$290,385*as compared to 16,971 hours in 2010 for a value of 353,845.35. For 2011, the total value to the Roseburg District was \$1,165,179 compared to a 2010 total value of \$1,472,239.35.

*This rate is calculated using independentsector.org rates of \$18.47 an hour for volunteer “work”

Volunteer Work Completed:

Table 7. All Volunteer Work on the Roseburg District in Fiscal Year 2011

Group	Hours volunteered	Value of work
All groups (excluding hosts)	8,188	\$874,794.00
Campground hosts	39,175	
Hosted workers	15,722	\$290,385
All groups total:	63,085	\$1,165,179

Projects included: trail and footbridge maintenance and construction; trash collection; back-country byway maintenance; soil surveys; shrub planting; invasive species removal; pruning & limbing for Silviculture; willow pole planting; information dissemination; campground maintenance, cleanup and rehabilitation; cutting and stacking firewood, wood working projects for developed sites, job shadows, recreation program assessments, hydrological assistance, bird banding, and a multi-agency National Public Lands Day (NPLD) that included Partnership for Umpqua Rivers, the Umpqua National Forest, Douglas County, and the City of Roseburg as we observed and contributed to the 29th Annual Umpqua Basin Cleanup. .

Byways Managed

- *North Umpqua Scenic Byway* – (8.4 of 80 miles) Joint coordination with the Umpqua National Forest, Rogue River National Forest and Medford District BLM.
- *Cow Creek Back Country Byway* – (20 of 45 miles) Joint coordination with Medford District BLM

Recreation Projects

- Developed a booth for the annual Outdoor Sportsmen’s Show at the Douglas County Fairgrounds. Joined efforts on the booth with the Umpqua National Forest and Douglas County Parks Dept.
- Conducted a joint activity at the 16th annual Free Fishing Day event at Cooper Creek Reservoir in partnership with several agencies and organizations.
- Completed Tioga Bridge Project work including construction of the Emerald Trail and clean up of the Emerald Meadow area.
 - Finished construction of cement steps at the Lone Rock Drift Boat Launch
 - Upgraded dilapidated conditions and facilities at the Scaredman Campground
 - Initiated planning for the Water Trails of the Umpqua corridor with multi-agency and public representation.

- Repaired major storm and wind damage of blow down trees on the North Umpqua Trail and at Susan Creek Campground.
- OHV Management Issues & Recommendations were developed and presented to the District Management Team in FY-2011

Hazard Tree Assessments Completed

Inventory of hazard trees was conducted at Susan Creek Campground, Susan Creek Day-Use Area, Susan Creek Falls Trail, Rock Creek Recreation Site, Millpond Recreation Site, Cavitt Creek Recreation Site, Scaredman Recreation Site, Tyee Recreation Site, North Umpqua Trail at Swiftwater, Lone Pine and Eagleview Group Recreation Sites and Island Day-Use area. Trees determined to represent a hazard to users were limbed or felled. Felled trees were removed for use in large wood instream installation projects.

Public Fatalities or Serious Injuries at BLM Recreation Sites

No fatalities or serious injuries occurred in any recreation site in fiscal year 2011.

Status of Recreation Plans

Roseburg BLM Fee Sites Business Plan	Completed 2007
North Umpqua SRMA Recreation Area Management Plan	Completed 2003
Cow Creek SRMA Recreation Area Management Plan	Completed 2001
Roseburg BLM Off-Highway Vehicle Implementation Plan	Completed 1997
North Umpqua Wild and Scenic River Management Plan	Completed 1992
Umpqua River SRMA Recreation Area Management Plan	Not started.
District Maintenance Operating Plan	Completed July 2009 Updated June 2010

Fee Status

The Federal Lands Recreation Enhancement Act was passed in the 2005 Omnibus Appropriations bill signed into law by President Bush on December 8, 2004. It authorizes the Secretaries of the Interior and Agriculture to establish, modify, charge and collect recreation fees at Federal recreation lands and waters for the next 10 years.

In 2011, the BLM spent \$203,000 from campground use fees campgrounds, pavilion rentals, and Special Recreation Permit fees, compared to \$136,000 spent in 2010. Expenditures went toward: volunteer host subsidies and purchase of volunteer uniforms, campground water system repairs, purchase of supplies for restrooms, recreation site equipment maintenance and repairs, vehicle costs, labor costs of operating fee sites, including temporary summer recreation technicians.

Recreation Pipeline Funds

Recreation pipeline funds are directed toward backlog recreation projects in six western Oregon BLM Districts. Roseburg spent \$225,000 out of \$295,000 allocated in FY-2011. \$70,000 was carried over for Roseburg District projects proposed in fiscal year 2012. Expenditures and projects completed in 2011 include:

- Purchase and placement of accessible facilities at several recreation sites
- Maintenance and upgrades of recreation tools and equipment
- Funds for summer rec technicians and others involved in approved 5830 projects
- North Bank Ranch shop maintenance ops/supplies

- Upgrade Scaredman Campground facilities and sites
- Maint supplies: paint, lumber hardware, soil, rock for rec site improvements
- Maintenance tasks at rec sites: hazard trees, trail work, stump grinding, and pavement repair.
- Repair work by youth crews on the North Umpqua Trail
- Complete cement steps to river at Lone Rock Boat Launch

Implementation Monitoring

Guidelines in the North Umpqua Recreation Area Management Plan (2003) were followed. The District Maintenance Operating Plan was updated and completed in 2010 by the District Recreation Planning and maintenance staff and updated in FY 2011. The Recreation Business Plan for fee sites was initiated in 2007 and has been implemented since then. The Wild & Scenic River Management Plan (1992) was followed, including completion of the end-of-year monitoring report for the North Umpqua Wild and Scenic River. Two summer recreation temporary employees were hired to patrol the river corridor and assist in other recreation duties.

Forest Management and Timber Resources

The Roseburg District manages approximately 425,000 acres of land, located mostly in Douglas County and in the Umpqua River Basin. Under the Northwest Forest Plan and the Roseburg District ROD/RMP, approximately 81,800 acres (or 19 percent of the Roseburg District land base) are available for scheduled timber harvest. The Northwest Forest Plan and the ROD/RMP provide for a sustainable timber harvest, known as the Allowable Sale Quantity (ASQ), from Roseburg District administered public lands of 45 million board feet (MMBF) annually.

To meet the ASQ commitment, the Roseburg District prepares environmental analyses and conducts timber sale preparation which includes sale layout, cruising, appraising and contract preparation. Timber sales are then advertised and offered at oral auctions. When timber sales become active, contract administration is conducted to ensure contract compliance. Importantly, the Roseburg District is investing in the future of the forests through forest development and reforestation activities.

The Roseburg District offered a total of 12 advertised timber sales in fiscal year 2011, for a total volume of approximately 25.8 MMBF. All of the timber sales offered in fiscal year 2011 were commercial thinning or density management sales. The advertised sales contained harvest in the matrix, for an ASQ volume of 11.4 MMBF. Another 4.2 MMBF of volume from these sales was from Riparian Reserve density management associated with the commercial thinning and as such is not ASQ volume.

Of the 12 advertised timber sales, five contained density management treatments in Late-Successional Reserves. These sales are designed to accelerate the development of late-successional characteristics in these forest stands. These five sales produced approximately 10.2 MMBF of volume, which is not part of the ASQ.

Miscellaneous timber volume was produced from negotiated timber sales, which are generally salvage sales, rights-of-way timber sales, and modifications to operating advertised timber sales. In fiscal year 2011, approximately 2.0 MMBF of volume was produced from miscellaneous sale volume. The total volume of timber sold on the Roseburg District for fiscal year 2011 was approximately 27.7MMBF.

The value of all timber sold in fiscal year 2011 was \$ 1,532,228. The monies associated with timber sales are paid as timber is harvested over the life of the contract, which is three years or less. Timber sale receipts

collected by the Roseburg District in fiscal year 2011 from active harvesting totaled \$2,077,624. All of the receipts were from Oregon and California Railroad Lands. No sale receipts were collected from either Coos Bay Wagon Road or Public Domain Lands.

Under Section 15 of the Small Business Act (15 U.S.C. 631), the BLM is required to sell a certain percent of advertised timber sale volume to businesses with less than 500 employees. The current share was calculated as 50 percent for the Roseburg District. When the requisite percentage is not achieved through the normal bidding process, a requirement is “triggered” to set aside timber sales for exclusive offering to small businesses. The Roseburg District was required to set aside no sales for small business during fiscal year 2011.

The following tables provide a summary, by land use allocation and harvest type, of timber sale volumes and acres of timber offered since the signing of the Northwest Forest Plan. Table 8 provides a more detailed annual display of offered timber by volume and acreage.

Table 8. Summary of Volume Offered in FY 2011

Sale Name	Acres	Volume (MBF)
Plug Nickel CT	158	1,822
Elk Camino CT	139	1,685
38 Special CT	132	1,507
Devils Den CT	69	949
Coq And Dagger CT ¹	62	987
Off Your Walker CT	289	5,102
Saddle Up to Paradise CT/DM ¹	190	1,641
Pass The Buck CT/DM ¹	207	1,222
Clever Beaver DM ¹	233	4,782
Rice Cake CT ¹	115	1,711
Mud Slinger CT/DM ¹	129	2,366
Eager Weaver DM	124	1,988
Modifications and Negotiated Sales	12	1,964
Totals	1,859	27,726

¹Projects offered for sale, but receiving no bids.

Table 9. Roseburg District Timber Sale Volume and Acres

MBF	1995-2006 Total	2007	2008	2009	2010	2011	2007-2011 Total	1995-2011 Total	1995-2011 Annual Average	RMP/EIS Assumed Annual Average	% of Assumed Average
Total Timber Sale Volume	306,024	28,341	44,384	23,425	40,856	27,727	164,733	470,757	27,692	49,500	56%
Matrix Timber Sales	236,840	12,459	19,915	15,364	23,876	12,755	84,369	321,209	18,895	45,000	42%
GFMA Regeneration Harvest	116,229	0	0	0	0	0	0	116,229	6,837		
GFMA Commercial Thinning	56,922	10,940	16,870	3,658	12,955	8,633	53,056	109,978	6,469		
GFMA Salvage & ROW	12,591	990	579	462	646	1,296	3,973	16,564	974		
C/D Block Regeneration Harvest	22,873	0	0	0	0	0	0	22,873	1,345		
C/D Block Commercial Thinning	23,450	529	2,404	10,700	9,882	2,729	26,244	49,694	2,923		
C/D Block Salvage & ROW	4,776	0	62	544	394	97	1,097	5,873	345		
RR Density Management	20,009	3,215	8,344	4,101	7,770	4,221	27,651	47,660	2,804		
RR Salvage & ROW	747	100	192	0	22	0	314	1,061	62		
LSR Density Management	31,635	12,063	15,260	2,172	5,861	10,180	45,536	77,171	4,539		
LSR Salvage & ROW	4,735	504	675	7	236	445	1,867	6,602	388		
Total All Reserves	57,124	15,882	24,470	6,280	13,889	14,846	75,367	132,491	7,794	4,500	173%
Key Watersheds Matrix Timber Sales	48,805	61	225	307	4,860	4,782	10,235	59,040	3,473	8,700	40%
AMA All Harvest Types	11,212	0	0	1,723	2,974	0	4,697	15,909	936	4,600	20%
AMA Salvage & ROW	847	0	0	58	118	126	302	1,149	68		
Total AMA Timber Sales	12,059	0	0	1,781	3,092	126	4,999	17,058	1,003		
Acres	1995-2006 Total	2007	2008	2009	2010	2011	2007-2011 Total	1995-2011 Total	1995-2011 Annual Average	RMP/EIS Assumed Annual Average	% of Assumed Average
Total Regeneration Harvest	3,845	0	0	0	0	0	0	3,845	226	1,190	19%
Total Commercial Thinning	5,326	828	1,316	1,017	1,762	891	5,814	11,140	655	250	262%
Total Density Management	3,634	1,163	1,727	445	896	958	5,189	8,823	519		
GFMA Regeneration Harvest	3,095	0	0	0	0	0	0	3,095	182		
GFMA Commercial Thinning	3,406	801	1,158	156	942	690	3,747	7,153	421		
GFMA Salvage & ROW	754	39	19	21	21	9	109	863	51		
C/D Block Regeneration Harvest	684	0	0	0	0	0	0	684	40		
C/D Block Commercial Thinning	1,715	27	158	722	593	201	1,701	3,416	201		
C/D Block Salvage & ROW	254	0	3	13	15	0	31	285	17		
RR Density Management	1,586	239	620	293	574	310	2,036	3,622	213		
RR Salvage & ROW	46	7	5	0	1	0	13	59	3		
LSR Density Management	2,048	924	1,107	152	322	648	3,153	5,201	306		
LSR Salvage & ROW	252	26	25	1	9	1	62	314	18		
Total All Reserves	3,933	1,196	1,757	446	905	959	5,263	9,196	541		
AMA Regeneration Harvest	161	0	0	0	0	0	0	161	9		
AMA Commercial Thinning	434	0	0	139	227	0	366	800	47		
AMA Salvage	79	0	0	4	5	2	11	90	5		

Figure 5

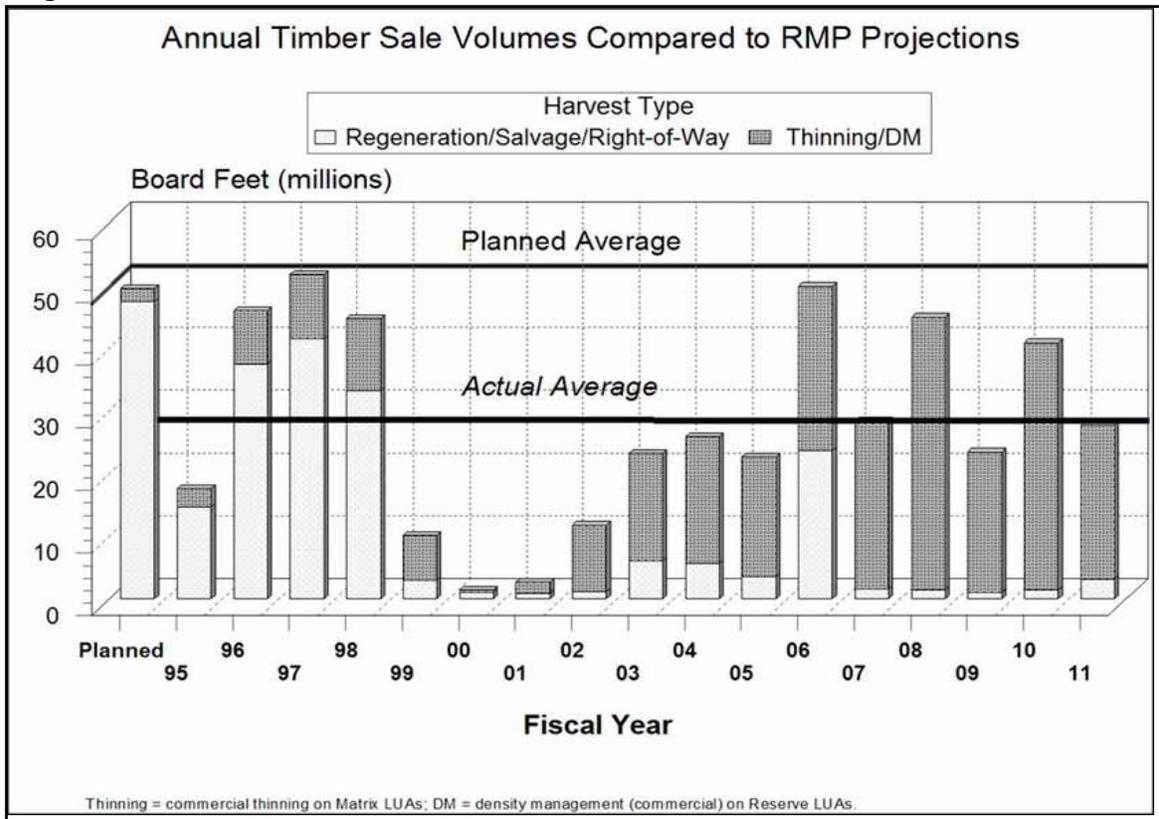
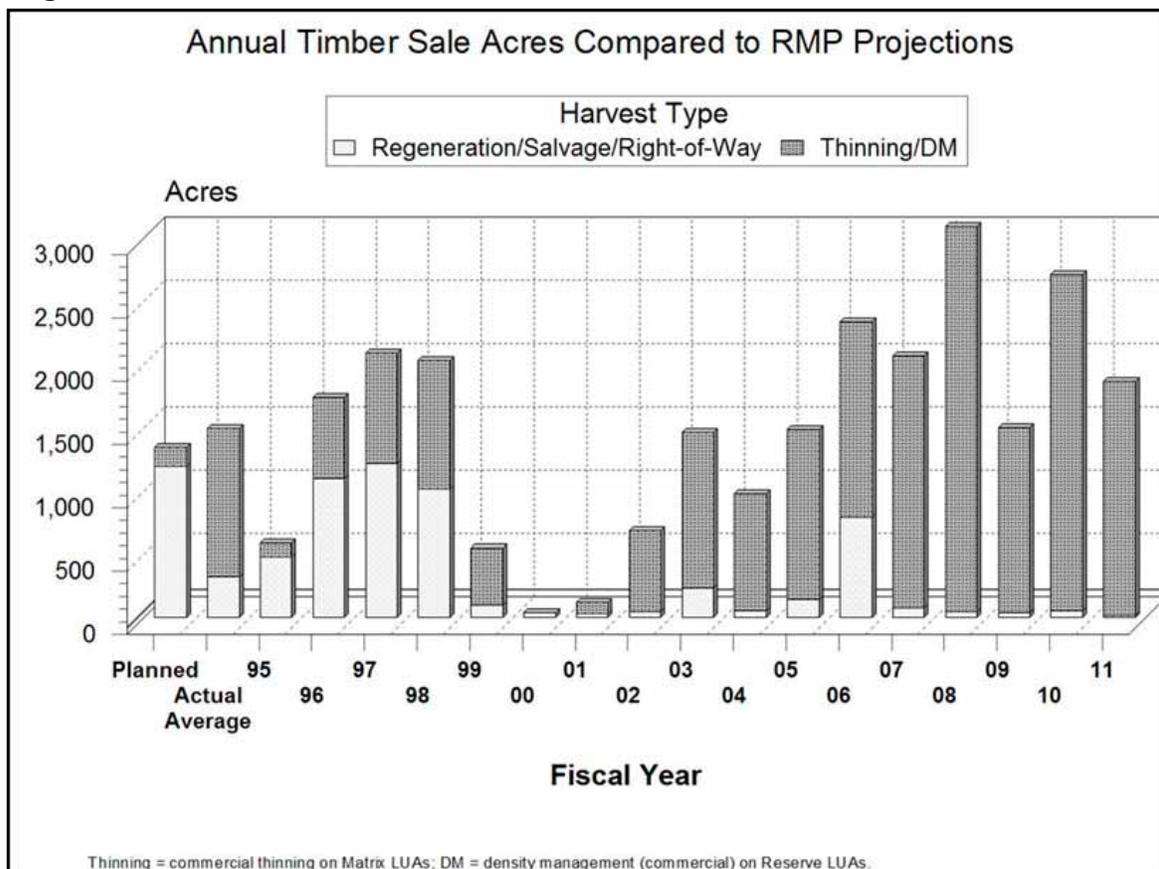


Figure 6



Silviculture Activities

Data is for contracts awarded after October 1, 1995. Data is displayed by fiscal year of contract award and does not necessarily correspond with the year the project was actually accomplished.

Brush field Conversion - To date no acres have undergone conversion. It is not expected that any attempt would be made unless herbicides were available as a conversion tool.

Site Preparation (FIRE) - The number of acres prepared with prescribed fire, both broadcast treatment and pile treatment is about 19 percent of what was envisioned in the ROD/RMP. No treatments have been done since 2002. A continued decline in trend is likely due to less than expected levels of regeneration harvest and other resource concerns.

Site Preparation (OTHER) - The number of acres prepared with alternative site preparation techniques is about 6 percent of what was envisioned in the ROD/RMP. No treatments have been done since 2002. Factors affecting this activity are the same as for site preparation, fire.

Planting (regular stock) - Total planted acres since 1995 without regard to genetic quality is at 33 percent of ROD/RMP assumed levels due to lack of accomplishment of planned ROD/RMP levels of timber harvest. No planting was done in 2011. Overall planting accomplishments are low because the Roseburg District has been unable to complete any substantial acreage in regeneration harvest timber sales since 1997. Regeneration harvests are the mechanism by which areas are made available for planting to start new forest stands for subsequent rotations. It is likely that in the short term, planting will remain far below planned levels because of the lack of the regeneration harvests which were anticipated in the ROD/RMP.

Planting (improved stock) - In fiscal year 2011, no acres were reforested with genetically improved Douglas-fir. For ASQ and monitoring report purposes, realization of genetic gain is assumed only for regeneration harvest units planted with improved seedlings located within the General Forest Management Area (GFMA) and Little River AMA.

Planting with genetically improved trees may occur on other land use allocations, e.g. Connectivity/Diversity Blocks, but any growth gains are highly speculative due to the high residual density harvest prescriptions applied there. A phase-in period for use of genetically improved Douglas-fir of 3 to 4 years was assumed to allow for older sales outside the GFMA/AMA land use allocations to be reforested and for seed orchards to reach production. However, planning for production of genetically improved stock has proved difficult due to the uncertainty of timber harvest timing. Seed must be sown one to three years prior to actual need. Due to decline in timber harvest overall and uncertainty in harvest timing, planting of genetically improved seedlings is approximately eight percent of planned ROD/RMP levels.

Maintenance/Protection - acres of maintenance/protection treatments is currently 154 percent of planned levels due in great part to treatment need carryover from the previous land use plan era and recent wildfire rehabilitation.

Precommercial Thinning (PCT) - currently PCT is at 91 percent of planned ROD/RMP levels. Potential treatment acres are declining from past levels due to declines in regeneration harvest and reforestation over the past 20 years.

Pruning - currently pruning accomplishments are 126 percent of assumed ROD/RMP level. This was due to an increase in available funding for the practice due to the effects of low regeneration harvest levels and fire management funds through fiscal year 2008.

Fertilization - Currently fertilization accomplishments are about 24 percent of assumed ROD/RMP levels. Implementation of fertilization has been delayed by an administrative appeal of the proposed action.

Forest development (reforestation and timber stand improvement), forest stand examinations, botany surveys, noxious weed treatments and tree marking projects were accomplished in fiscal year 2011 through service contracts valued at approximately \$690,000.

Table 10. Roseburg District Forest Development Activities

	FY 96-09	FY10	FY11	Totals to Date	Average Annual	Planned Annual	Difference (Actual-Planned)	Accomplishment as a % of RMP Assumptions
Brushfield Conversion	0	0	0	0	0	15	(240)	0%
Site Preparation (fire)	2,591	0	0	2,591	162	840	(10,849)	19%
Site Preparation (other)	51	0	0	51	3	50	(749)	6%
Planting (total)	7,558	4	0	7,562	473	1,430	(15,318)	33%
Planting (improved stock)	1,533	0	0	1,533	96	1,140	(116,707)	8%
Maintenance/Protection	18,724	1,194	580	20,498	1,281	830	7,218	154%
Precommercial Thinning	51,655	2,575	2,820	57,050	3,566	3,900	(5,350)	91%
Pruning	9,266	0	0	9,266	579	460	1,906	126%
Fertilization	5,504	0	0	5,504	344	1,440	(17,536)	24%

Data is for forest development contracts awarded after October 1, 1995. Data is displayed by fiscal year of contract award and does not necessarily correspond with the year the project was actually accomplished. Percent accomplishments are annualized based on fifteen years of implementation and 1st decade planned levels. Numbers in parentheses are negative numbers.

Special Forest Products

In addition to the advertised timber sales described above, the District sold a variety of special forest products as shown in Table 11. The sale of special forest products generally follow the guidelines contained in the Oregon/Washington Special Forest Products Procedure Handbook, H-5400-2. There are no estimates or projections in the ROD/RMP or PRMP/EIS that need to be compared to the sold quantities shown.

In general, the Roseburg District has been able to meet public demand for special forest products, with the exception of firewood for home heating. Firewood has been generated almost exclusively from logging residues in past years. With the reduction in regeneration harvest the District has experienced, there has been very little opportunity to provide either large quantities or high quality firewood.

Table 11. Special Forest Products

No. of Contracts	FY96-05	FY06	FY07	FY08	FY09	FY10	FY11
Boughs-Coniferous	775	43	80	81	66	45	30
Burls & misc.	75	1	1	1	0	0	0
Christmas Trees	2,172	228	188	234	289	210	146
Edibles & Medicinals	22	0	0	0	0	0	1
Floral & Greenery	935	296	365	650	408	445	554
Mosses - Bryophytes	24	0	0	0	0	0	0
Mushrooms - Fungi	779	256	190	776	577	434	385
Seeds and Cones	1	0	0	0	0	0	0
Transplants	48	3	4	2	2	4	3
Wood Products/Firewood	2,234	261	291	300	404	467	542
Totals	7,065	1,088	1,119	2,044	1746	1605	1,661
Quantity Sold	FY96-05	FY06	FY07	FY08	FY09	FY10	FY11
Boughs-Coniferous (lbs)	691,192	58,000	169,700	195,500	138,400	97,700	92,500
Burls & misc. (lbs.)	145,192	400	40	334	0	0	0
Christmas Trees (ea.)	2,172	228	188	234	289	210	146
Edibles & Medicinals (lbs.)	49,020	0	0	0	0	0	500
Floral & Greenery (lbs.)	444,041	146,054	169,445	327,300	191,250	186,650	262,800
Mosses - Bryophytes (lbs.)	40,974	0	0	0	0	0	0
Mushrooms - Fungi (lbs.)	46,651	20,347	13,630	51,361	33,913	28,513	29,528
Seeds and Cones (bushels)	75	0	0	0	0	0	0
Transplants	1,048	52	101	43	20	76	76
Wood Products/Firewood (bf) except 99-03 reported cu ft	2,015,888 bf 386,014 cu. ft	102,327	114,162	44,832	49,316	61834	
Value (dollars)	FY96-05	FY06	FY07	FY08	FY09	FY10	FY11
Boughs-Coniferous	18,477	1,745	5,091	5,865	4,152	2,931	2,775
Burls & misc.	5,471	12	10	10	0	0	0
Christmas Trees	10,900	1,140	940	1,170	1,445	1,050	730
Edibles & Medicinals	1,798	0	0	0	0	0	25
Floral & Greenery	32,659	13,461	16,142	30,563	18,034	18,300	24,772
Mosses - Bryophytes	1,447	0	0	0	0	0	0
Mushrooms - Fungi	11,700	5,097	2,965	12,737	8428	6,847	7,337
Seeds and Cones	19	0	0	0	0	0	0
Transplants	964	75	42	20	20	40	30
Wood Products/Firewood	439,379	20,295	18,393	7,308	16,759	22,181	39,412
Totals	\$522,814	\$41,825	\$43,583	\$57,673	\$48,838	\$51,349	\$75,081

Noxious Weeds

The Roseburg District continues to survey BLM-administered land for noxious weeds by conducting inventories and pre-project surveys. Over 5,500 acres were surveyed in fiscal year 2011. Infestations of high priority noxious weeds are reported to the Oregon Department of Agriculture (ODA). The District works with ODA and Douglas Soil and Water Conservation District (DSWCD) to control those infestations.

The ROD/RMP identified two objectives for noxious weeds – to contain or reduce weed infestations, and to prevent the introduction and spread of weeds. In working towards the first objective, approximately 2,220 acres of both BLM and private lands were treated for noxious weeds in cooperation with DSWCD using manual, mechanical, and chemical control methods. Title II funding contributed to the control of Portuguese broom on 104 acres within the Coordinated Weed Management Area, of which approximately 33 acres are managed by the BLM. This funding also contributed to treatment of approximately 850 acres of Scotch broom and Himalayan blackberry infestations in sand and gravel sources and along BLM roads. False brome, which was discovered on BLM-administered lands in the North Umpqua River area in 2008 was hand pulled in cooperation with DSWCD along Canton Creek and the North Umpqua River.

No additional biological control agents were released within the Roseburg District. They are widely established, however, on 14 noxious weed species throughout the Roseburg District that include: bull thistle, Canada thistle, gorse, Italian thistle, meadow knapweed, milk thistle, poison hemlock, purple loosestrife, rush skeletonweed, Scotch broom, slender-flowered thistle, St. John's wort, tansy ragwort and yellow starthistle. Once released, biological control agents reproduce and spread. Although monitoring has been done to determine the survival and establishment of biological control agents, no efforts have been made to quantify the extent or level of control achieved by these agents.

In working towards the second objective of preventing the introduction and spread of weeds, BLM incorporates weed inventory, treatment and monitoring into other projects on the District and develops partnerships. The results of these efforts are included in the figures above. BLM conducts education and outreach programs for children and adults to improve their understanding of noxious weeds and means to prevent the spread and reduce introduction of such weeds.

Table 12. Noxious Weeds Control Summary

Treatment	Species	FY96-05 Cumulative Acres	FY06 Acres	FY07 Acres	FY08 Acres	FY09 Acres	FY10 Acres	FY11 Acres
Manual/Mechanical	Black locust	2	0	0	0	0	1	0
	Diffuse knapweed	0	1	1	1	1	0	1
	English hawthorn	86	10	0	10	10	14	140
	English ivy	56	1	0	0	0	4	4
	False brome	0	0	0	0	0	20	10
	French broom	25	0	0	0	0	0	0
	Gorse	8	0	0	0	0	0	0
	Himalayan blackberry	982	85	10	46	50	250	100
	Japanese knotweed	3	0	1	0	3	0	0
	Malta starthistle	59	0	1	0	0	1	0
	Parrot feather	1	0	0	0	0	0	0
	Periwinkle	0	0	0	0	0	1	0
	Portuguese broom	11	0	0	0	0	0	0
	Purple loosestrife	6	1	1	0	1	1	1
	Reed canary grass	0	0	0	0	0	1	1
	Rush skeletonweed	173	2	1	1	1	1	0
	Scotch broom	2,031	27	60	35	134	200	100
	Spanish broom	0	15	0	0	0	0	0
	Shiny leaf geranium	0	0	0	0	0	1	1
	Spotted knapweed	0	0	1	1	1	1	1
	Sulfur cinquefoil	4	0	0	0	0	0	0
	Tansy ragwort	8	0	1	1	1	0	0
	Thistles (Italian, Bull, Milk)	252	16	1	1	1	5	10
	Yellow starthistle	293	24	30	3	10	15	10
	Woolly distaff thistle	0	1	1	1	1	1	1
Chemical	Canada thistle	0	0	0	0	5	10	10
	Diffuse knapweed	26	2	0	0	0	0	0
	English ivy	2	0	0	0	0	0	0
	English hawthorn	0	0	10	1	10	50	50
	French broom	1	0	189	0	0	0	0
	Gorse	4	1	0	0	0	0	0
	Himalayan blackberry	731	232	143	275	560	234	594
	Portuguese broom	1,076	458	85	107	106	106	106
	Rush skeletonweed	0	0	0	1	1	0	0
	Scotch broom	2,957	376	770	670	690	793	850
	Spotted knapweed	12	1	0	1	0	0	0
	Thistles (Italian, Bull, Milk)							35
	Woolly distaff thistle	5	1	0	0	1	0	0
	Yellow starthistle	12	1	0	1	1	0	0
Fire	Medusahead wildrye							98

Fire and Fuels Management

Table 13. Fire & Fuels Management Activity

Summary of Activity						
Fiscal Year	Prescribed Fire* (in acres)	Mechanical Treatment (in acres)	On District Wildfires			Off District Wildfires & Incidents
			Total Fires	Lightning Caused	Human Caused	
1995-2005**	6,026	764	119/ 397.24 ac	84	33	739 district personnel and 36 Administratively Determined (AD) or annuitants dispatched, 69 engines, 27 Probe/Palm IR, assorted fire equipment, tenders, road construction equipment, and mechanic services in response to 333 wildfires, and hurricanes Katrina and Rita..
2006	431	577	6/0.88 ac	3/0.85 ac	3/.03 ac	The following accepted 98 assignments and were assigned to 49 different incidents: 46 red-carded district personnel, 5 red-carded ADs, 1 rehired Annuitant Personnel responded to wildfires and hurricanes Katrina and Rita.
2007	432	605	14/1.99 ac	13/1.49 ac	1/0.5 ac	There were 56 red-carded district personnel, and 9 red carded ADs, for the FY 2007 season. Twenty-three red-carded employees and 9 red-carded ADs accepted 77 assignments to 33 incidents.
2008	312	615	13/ 27.03 ac	11/ 25.02 ac	2/2.01 ac	There were 56 red-carded district personnel, and 9 red-carded ADs, for the FY 2008 season, of these 44 red-carded employees, and 8 red-carded ADs accepted 133 assignments to 47 incidents and incident support.
2009	583	0	8/132 ac	4/1 ac	4/131 ac	There were 56 red-carded district personnel, and 12 red carded ADs, for the FY 2009 season, of these 24 red-carded employees, and 5 red-carded ADs accepted 76 assignments to 18 incidents, incident support & 2 severity assignments.
2010	433	563	5/1.80 ac	1/0.01 ac	4/1.79 ac	There were 46 red-carded district personnel, and 10 red-carded ADs for the FY 2010 season. Of these 45 red carded employees and 12 red carded ADs accepted 59 fire assignments to 13 incidents, incident support and 1 severity assignment. One District employee applied and accepted a detail with the Redmond IHC crew. Two Incident Medical teams were dispatch to 4 fire assignments
2011	410	356	8/1.05 ac	6/0.85 ac	2/2.26 ac	There were 38 red-carded district personnel, and 8 red-carded ADs for the FY 2011 season. Of these 25 red carded employees and 5 red carded ADs accepted 77 fire assignments to 28 incidents, incident support and 1 severity assignment. Two Incident Medical teams were dispatch to 6 fire assignments.

* Special care is taken to ensure that all prescribed fire projects are done in compliance with the Oregon Smoke Management Plan.

**The cause of 2 fires was not determined.

Table 14. Dispatched Personnel and Equipment in Fiscal Year 2011

STATE	REDCARDED PERSONNEL	REDCARDED AD's/Incident Medical Teams	ENGINES
Alaska	1	1	
Arizona	4		
Florida	1	4/2	
Georgia	3		
Montana	1		
New Mexico	7		
Oklahoma	3 severity-3wildfire	7/1	2
Oregon	30		1 severity-1wildfire
Texas	2	12/1	4
Washington	1	2	4

Access and Rights-of-Way

Because public and private lands are intermingled within the District boundary, each party must cross the lands of the other in order to access their lands and resources, such as timber. Throughout most of the District, this has been accomplished through O&C Logging Road Rights-of-Way Permits and O&C Reciprocal Logging Road Rights-of-Way Agreements with neighboring private landowners. The individual agreements and associated permits, totaling approximately 140 on the Roseburg District, are subject to the O&C regulations in effect at the time of execution. The current regulations are found at 43 CFR 2812. Additional rights-of-way have been granted or renewed under Title V of the Federal Land Policy and Management Act for energy and non-energy utility lines, domestic and irrigation water pipelines, legal ingress and egress, and communication sites. Table 15 reflects the fiscal year 2011 accomplishments of the access and rights-of-way program on the District.

Table 15. Access and ROW Summary.

Fiscal Year	New O&C Permits Issued	New FLPMA ROW Grants Issued	Amendments to O&C Permits Approved	Assignments To O&C Permits Approved	Easements Acquired
2001	3	0	0	5	0
2002	7	6	27	4	0
2003	4	1	13	6	0
2004	10	6	8	3	1
2005	7	4	4	2	0
2006	4	18	13	4	2
2007	3	6	29	6	0
2008	2	2	4	1	0
2009	2	2	6	1	1
2010	2	2	9	3	0
2011	8	5	4	1	1
Totals	52	52	117	36	5

Roads

The Roseburg District has approximately 3,000 miles of roads which are controlled or improved by the BLM. The Roseburg District road maintenance crew maintains roads on a regular basis, and maintained over 500 miles of road during fiscal year 2011. The crew accomplished more than 15 special projects, and performed subsoiling in logged units to the equivalent of three work months. Additionally the crew cut 100 miles of brush, placed 750 tons of hot-mix, replaced more than 70 culverts, and placed more than 5,000 cubic yards of crushed rock.

Energy and Minerals

The Formosa Abandoned Mine Land (AML) site, an abandoned copper and zinc mine located at Silver Butte, encompasses approximately 76 acres of privately owned property and 2 acres of BLM managed lands in steep mountainous terrain. The mine originally operated in the early 1900s, with the majority of production occurring between 1927 and 1933. The Formosa mine was reopened by Formosa Explorations, Inc. in 1990 and produced copper and zinc ore at a rate of 350-400 tons per day between 1990 and 1993. The Oregon Department of Geology and Minerals Industries (DOGAMI) issued a permit for the mining activities and required Formosa Explorations, Inc. to establish a reclamation bond prior to beginning operations. The mine closed in 1994 and Formosa Explorations, Inc. conducted reclamation activities using a bond of one million dollars. Formosa Explorations, Inc. spent most of the bond money, satisfied most of DOGAMI's reclamation requirements, and declared bankruptcy. In the winter of 1995-1996, the drainfield from the adits failed and began releasing acid mine drainage (AMD) to Middle Creek and South Fork Middle Creek.

Post reclamation monitoring of South Fork Middle Creek and Middle Creek indicated that 18 stream miles have been impacted from metals contamination, primarily cadmium, copper, lead and zinc, associated with acid mine drainage from the Formosa mine site. Based on this situation, the Oregon DEQ and BLM have determined that this project is a high priority for further action.

Results from investigations completed from 1994 to 2000 indicated that the concentrations of dissolved metals found in Middle Creek and South Fork Middle Creek pose an imminent threat to aquatic life including anadromous fish.

In fiscal year 2000, the Roseburg District issued an action memorandum to approve Removal Actions at the Formosa AML site by the Department of Environmental Quality. The Roseburg District has the authority for this action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). At the time, surface adit effluents were thought to be the primary pathway of contaminants to adjacent streams. The Oregon DEQ Removal Action consisted of diversion of surface adit waters away from the headwaters of Middle Creek.

The Oregon DEQ, the lead agency in the clean-up of the Formosa AML site, initiated further investigation in November 2001 to supplement the Remedial Investigation performed by the BLM in 2000. The field investigation portion of the supplemental Remedial Investigation, completed in June 2002, included extensive monitoring by BLM and DEQ. The Oregon DEQ, its contractor Hart Crowser, and the BLM have analyzed the data and Hart Crowser has prepared a Supplemental Remedial Investigation Report. Results of the data analysis indicate that groundwater from the mine workings, not surface adit effluents, is the primary contributor of metals to both Middle Creek and the South Fork of Middle Creek.

During fiscal year 2004, Oregon DEQ and BLM completed the Formosa *Human Health and Ecological Baseline Risk Assessment*. The report concluded that metals contamination poses the highest risk to aquatic

organisms and exceeds Oregon DEQ acceptable human health criteria for campers. In December 2004 the Oregon DEQ published the *Formosa Feasibility Study*. The study notes the complex nature of the site makes identification of an up-front solution problematic. Instead a number of possible remedial technologies are identified. The recommended remedy is a phased approach. Lower cost elements would be implemented and monitored for effectiveness prior to implementing more costly elements.

Throughout fiscal year 2005, the BLM continued to assist in monitoring the Oregon DEQ Removal Action, as well as water quality in the Middle Creek subwatershed and Cow Creek watershed. Results indicate that water quality remains unchanged relative to previously published Removal Investigations. Also in 2005, the U.S. Environmental Protection Agency (EPA) Region 10 responded to a citizen petition and issued a CERCLIS number for the Formosa Mine Site. The action requires EPA to review available information and conduct site investigations, as necessary, to determine if further action is necessary.

During 2006, Region 10, in cooperation with Oregon DEQ and BLM, conducted several investigative visits to the site. In May of 2006, Oregon DEQ, citing the high cost of mine clean-up and lack of agency funds, officially requested that EPA assume the role of lead agency. EPA concurred, and with the Governor's Office support, Region 10 recommended the site to Washington Headquarters for inclusion on the National Priorities List. On September 19, 2007, the Formosa mine site was added to the EPA's National Priorities List, also known as the Superfund list. In 2009 the EPA identified the need for, and conducted, further site sampling. The EPA is continuing its evaluation and determining future clean up actions at the site and plans to conduct additional sampling in the coming years.

In 2011, the BLM and the EPA continued the Remedial Investigation (RI) activities at the Formosa AML site. These activities included the installation of several monitoring wells, waste rock characterization analysis, continued surface water monitoring and analysis, the completion of a three dimensional modal of the mine workings and topographic features, and core drilling investigations. A final draft of the RI will be completed in early 2012.

BLM strongly endorses site clean-up and the cessation of pollution emanating from the Formosa mine. BLM will continue to work collaboratively with all partners in finding solutions to the problems generated by the site.

Roseburg BLM has had no energy related activity in over 10 years and the potential for the next ten years is low. The BLM expects little to no change in mining claim activities. While the BLM expects that activity in rock quarries (mineral material sites) will remain about the same as in previous years, NEPA analysis of the Little Wolf Creek Community Pit development and reclamation plan was completed in the Tyee area to provide a long term regional quarry for potential future road surfacing material and public mineral material needs in that area.

Table 16. Roseburg District Mining Related Activities

	FY96-05	FY06	FY07	FY08	FY09	FY10	FY11
Plan of Operation	1	0	0	0	0	0	0
Mining notices received & reviewed	27	0	0	1	1	0	0
Mining claim compliance inspections	430	20	20	20	20	23	10
Notices of non-compliance issued	10	0	0	0	0	0	0
Community pit inspections	372	10	15	17	17	17	21
Mineral Material Disposals*		14	17	17	17	15	16

*Mineral Material Disposals have not been reported until fiscal year 2006.

Land Tenure Adjustments

There were no acquisitions, donations, or exchanges completed during fiscal year 2011.

Unauthorized Use

The public lands continue to see a large number of unauthorized uses. These unauthorized uses include dumping, individuals attempting to live on public lands, land owners denying access on BLM rights-of-way to BLM employees, individuals building permanent hunting camps, individuals taking Special Forest Products without authorization and individuals using closed roads or trails or creating new off-highway trails.

Of these actions, dumping of household trash, commercial dumping of tires and building materials and the dumping of abandoned vehicles is by far the biggest detriment to public land. This is partly because it is so widespread and partly because the impact of dumping can be so long term.

Hazardous Materials

In FY 2011, the Roseburg District Office Hazardous Materials program consisted of a number of actions, including investigations, removals, clean-ups, and coordination, as summarized below:

- Updated the 2011 Oregon State Fire Marshals Report. Emergency Planning and Community Right-To-Know Act (EPCRA).
- Filed the 2011 Annual Hazardous Waste Report with the Oregon Department of Environmental Quality.
- Had First Strike remove unhealthy materials from the Yellow Mountain radio communications site.
- Made two First Responder training presentations to the Roseburg District resource areas.
- Provided and helped the alternate Hazardous Materials coordinators with training needs for the Roseburg District
- Continued operations under Zone Agreement with Coos Bay District for Hazardous Materials support.

Table 17. Hazardous Material Incidents Requiring Response

Fiscal Year	Incidents Requiring Response
1999	3
2000	2
2001	1
2002	2
2003	3
2004	3
2005	3
2006	1
2007	0
2008	3
2009	0
2010	1
2011	1

Coordination and Consultation

Federal Agencies

Significant cooperation and coordination between Federal agencies has taken place since June 1995. There is ongoing participation in the Southwest Oregon Provincial Executive Committee and Southwest Oregon Provincial Advisory Committee. There have been many interagency efforts that have included the Roseburg District BLM, USFWS, USFS, NMFS, EPA, USGS, National Resource Conservation Service, and Bonneville Power Administration on projects such as watershed analysis, late-successional reserve assessments, the Little River Adaptive Management Area, water quality projects, transmission lines, etc. In addition, personnel from several of these agencies have been involved in project level planning, conflict resolution and Section 7 consultation under the Endangered Species Act. Federal agency coordination and cooperation has occurred through the Regional Interagency Executive Committee and the Regional Ecosystem Office established under the Northwest Forest Plan.

State of Oregon

The Roseburg District has continued its long-term working relationship with Oregon Department of Forestry, Oregon Department of Fish and Wildlife, State Historic Preservation Office, and the Oregon Department of Environmental Quality. These relationships cover diverse activities from timber sale planning to fish habitat inventory, water quality monitoring to hazardous material cleanup, and air quality maintenance to wildfire suppression. The development of the North Bank Habitat Management Area environmental impact statement was accomplished in cooperation with Oregon Department of Fish and Wildlife.

Counties

The Roseburg District is located primarily within Douglas County, with a small number of acres of Roseburg District BLM-administered lands in Lane County and Jackson County. There is frequent communication between the Roseburg District, county commissioners, and other county staff. This communication involves BLM and county proposed projects that may affect county lands, water quality and other resources. County commissioners receive copies of all major publications, project updates, and project proposals.

Cities

The Roseburg District has memoranda of understanding with the cities of Drain, Riddle, and Canyonville. The objective of these agreements is to maintain the best water quality through Best Management Practices. A Special Land Use Permit has been issued to the City of Myrtle Creek for watershed protection which includes the city intake and the adjoining 190 acres.

Tribes

Tribes are represented on the Southwest Oregon Provincial Interagency Executive Committee which coordinates activities within the province. The District contacts tribes directly for the coordination of many projects.

Watershed Councils

The Roseburg District supports and cooperates with all the watershed councils in the Umpqua Basin—the Partnership for the Umpqua Rivers, Elk Creek Watershed Council, and the Smith River Watershed Council. These councils work toward the restoration and enhancement of water quality and fish populations. See Table 3 for a list of projects completed in cooperation with watershed councils and other organizations.

Other Local Coordination and Cooperation

The District maintains an information line (541-440-4932) with menus relating to fire levels and closures, road information, and recreation opportunities. Roseburg BLM sponsors more than 15 different public service events annually, to recognize special occasions such as Earth Day and National Public Lands Day. Additionally, Roseburg BLM staff frequently present natural resources information and host field trips for local schools and community groups. The District has ongoing opportunities for volunteer work, and in fiscal year 2011, volunteers and hosted workers accomplished extensive work, some of which is highlighted in the recreation and noxious weed treatment portions of this Annual Program Summary. Hosted workers include the Phoenix School's Oregon Youth Conservation Corps and the Northwest Youth Corps.

Research

A long term (15 years plus) western Oregon density management study was initiated in 1997 by the Roseburg District in cooperation with the USGS Forest and Rangeland Ecosystem Science Center (FRESC). Three study sites were identified for the Roseburg District. One was subsequently dropped from the study due to litigation. The study was established to explore techniques to accelerate development of young stands into late-successional forest structures through active management. Initial treatments were implemented in 1997-1998. The study contains components examining vegetation response, effects of treatments on micro-climate and micro-habitat, aquatic vertebrates, lichens and bryophytes. These sites also serve as demonstration areas for educational purposes.

A timber sale was implemented for the second phase of research treatments at the Little Wolf Creek study site in fiscal year 2010. Post-treatment data collection was also completed in fiscal year 2010.

Over forty published journal articles and book chapters have been produced since the study's inception. In addition, more than forty abstracts, brochures, posters and unpublished reports have been prepared.

Information Resource Management

The ability to accomplish complex management of diverse resources over 425,000 acres requires enormous amounts of information. In order to accomplish this management in an efficient manner, the Roseburg District employs the most up to date electronic office and GIS hardware and software. Recently there have been several major accomplishments concerning information resource management.

Enterprise-wide group policies are set at the Department of Interior level and are implemented automatically on all computer and user accounts. Security remains a top priority while keeping user needs in balance. All District personnel have access to agency email, the Internet and office software.

Over the next two years, the BLM will see a consolidation of servers and system administration to the Department of the Interior. This move will leverage DOI's ability to manage Information Technology assets and personnel more efficiently. The Roseburg District's goal is to continue to place appropriate technology and

training in the hands of employees and decision makers to increase efficiency and effectiveness.

Most significant to District resource management professionals is the integrated use of the Geographic Information System. This electronic mapping and analysis tool provides a means for District specialists to complete complex analyses of spatial and relational data.

The BLM in western Oregon made a substantial investment in building a geographic information system as it developed the ROD/RMPs. This information system has allowed the BLM to organize and standardize basic resource data across the Oregon Districts. The GIS has now become a day to day tool in resource management that allows us to display and analyze complex resource issues in a fast and efficient manner. BLM is now actively updating and enhancing the resource data as conditions change and further field information is gathered. The GIS plays a fundamental role in ecosystem management which allows the BLM to track constantly changing conditions, analyze complex resource relationships, and take an organized approach for managing resource data.

Cadastral

Cadastral Survey crews perform an essential function in the accomplishment of resource management objectives. Cadastral Survey traditionally works to perform legal boundary surveys; establish, or reestablish, mark and maintain Federal boundaries. In addition to the normal work, Cadastral Survey provided technical assistance for legal and spatial land information products and other related services that enhance the management of the natural and cultural resources. One Cadastral crew operated on Roseburg District--their Fiscal year 2011 accomplishments include 10 projects completed, 23 miles of line surveyed/resurveyed, 18 miles of boundary line posted and blazed, 3 Public Land Survey System (PLSS) corners established or reestablished, 28 existing PLSS corners rehabilitated, and an additional 6 existing PLSS corners remonumented.

Table 18. Roseburg District Cadastral Survey Activity

	1998-2008	2009	2010	2011
Projects Completed	140	22	15	10
Miles of Survey Line Run	587	63	48	23

Law Enforcement

The Roseburg District law enforcement program is dynamic and continually adjusting to meet the needs of the District, State, and National Office. Currently, the law enforcement staff consists of two full-time BLM Rangers and two full-time contract Sheriff's Deputy positions from the Douglas County Sheriff's Office..

During 2011 the districts law enforcement program operated at approximately 60 percent staffing due to one Ranger position being vacant for six months, one contract Deputy position only working 10 months due to illness and the other contract Deputy position transitioning to a different Deputy. There were also several patrol work months lost to training for the new Ranger and Deputy.

Annually, Rangers are required to participate in up to 14 days of various details away from the home office in addition to several weeks of training commitments. In 2011 Roseburg District Law Enforcement Rangers assisted the Medford, Burns and Vale Districts in large marijuana investigations. An excellent working relationship exists between the Douglas County Sheriff's Office and the BLM, due in large part to the contract deputy positions. This relationship results in and ensures that law enforcement coverage is always available to

the district. The law enforcement staff routinely networks with cooperating agencies, sharing information on criminal activity and persons who may be a threat to public safety. Additionally the staff assists and participates in training with other local agencies.

The strategy of the law enforcement program is to pro-actively focus patrols based upon season, recent criminal activity, historical criminal activity, employee patrol requests and recreational activity levels. The primary focus of the law enforcement operation is employee safety and responding to patrol requests. Additional patrol time can be broken down by season. Summer- developed recreation sites and other areas of high recreational use. Late Summer and Early Fall- Counter Drug Operations and fire incidents. Late Fall, Winter and Spring- special forest products. Off Highway Vehicles (OHV's), transient camps, trash dumping and abandoned vehicles are a year round work load.

The district has seen an increase in special forest product violations, particularly firewood theft. This is most likely a result of the current economic conditions.

During 2010 the Roseburg District focused a significant portion of the the law enforcement assets toward Off Highway Vehicle (OHV) enforcement. During 2011 there was a significant decrease in the number of OHV related violations. This is most likely due to the previous years emphasis on OHV enforcement. Law enforcement officers will continue to patrol popular off-highway vehicle use areas as they have done historically.

Table 19. Summary of Criminal Activity on District in 2011

Special Forest Products Theft	31
Theft	18
Vehicle Violations	36
Vandalism	16
Liquor Laws	15
Assist Other Agencies	81
Driving Under the Influence	2
Drug/Narcotics	14
Violate Closure\Restriction	56
Abandoned Property/vehicles	13
Littering/Dumping	37
Accident Investigation	9
Camping Violations	71
Warrant Arrest	1
Search & Rescue	15
Disorderly Conduct/Hazard /Nuisance	20
Forgery/Counterfeiting	0
Game Animal/Hunting Violations	3
Investigation for Human Remains	5

*Statistics are from January 2011-November 2011

Table 19.1. Citations, Warnings, and Arrests made in 2011 in Connection to Off-Highway Vehicles.

	Reg. Cites	Reg. Warnings	Suspended Cites	Equip. Cites	Equip. Warnings	Trespass Issues	Vehicle Inspection	Arrests
12 MonthTotal	0	7	0	0	1	15	23	0

National Environmental Policy Act Analysis and Documentation

NEPA documentation

BLM reviews the environmental effects of a proposed management action and complies with NEPA in four ways: categorical exclusions (CX), administrative determinations, environmental assessments (EA), or environmental impact statements (EIS).

BLM may categorically exclude categories of actions determined not to have significant environmental effects, either individually or cumulatively. Actions that are categorically excluded do not require further analysis under NEPA. These categories of actions are published in the Departmental Manual and in regulation, and CXs are addressed specifically by Department of Interior and BLM guidelines.

BLM may make an administrative determination that existing NEPA documentation adequately analyzes the effects of a proposed action. This determination of NEPA adequacy (DNA) confirms that an action has been adequately analyzed in existing NEPA document(s) and conforms to the land use plan, thus, no additional analysis is needed.

BLM prepares an EA to analyze the effects of actions that are not exempt from NEPA, are not categorically excluded, and are not covered by an existing environmental document. An EA is prepared to determine if a proposed action or alternative(s) would significantly affect the quality of the human environment. If the action would not have a significant impact to the human environment, this conclusion is documented in a “finding of no significant impact” (FONSI). If the action is found to have a significant impact on the human environment, an environmental impact statement is prepared.

BLM prepares an environmental impact statement (EIS) for major Federal actions that will significantly affect the human environment and that have not been previously analyzed through an EIS.

Roseburg District Environmental Documentation, Fiscal Years 1996-2011

Table 20. Summary of NEPA Documentation in Fiscal Year 2011

NEPA documentation	FY 2011	FY 1996-2011 Totals
Environmental Impact Statements	0	1
Environmental Assessments	5	150
Determinations of NEPA Adequacy or Plan Conformance Determinations	5	82
Categorical Exclusions	24	741

The environmental assessments vary in complexity, detail and length depending upon the proposal under consideration.

Protest and Appeals

The Roseburg District received the following protests and appeals on management actions in fiscal year 2011.

Table 21. Summary of Protests & Appeals in Fiscal Year 2011

Project Name	Project Type	Sale Date	Protested by	Appealed by	Status
Calahan Mudaxle Commercial Thinning	Timber Sale	Aug 11. 2010	Pacific Northwest 4-Wheel Drive Association, Umpqua Valley Timber Cruisers 4-Wheel Drive Club, Ruff Country 4-Wheel Drive Club and X-Treme Offroaders 4-Wheel Drive Club		Response sent on June 17, 2011
Calahan Mudaxle Commercial Thinning	Timber Sale	Aug 11. 2010	Cascadia Wildlands & Klamath Siskiyou Wildlands Center		Response sent on June 17, 2011
Craven Raven Commercial Thinning	Timber Sale	June 9 2010	Appeal of Craven Raven CT DR	Cascadia Wildlands and Oregon Wild on Oct. 8, 2010	Responded to Oct. 18,2010
Tioga Bridge	Recreation Project	N/A		Rob and Jana Bowler Complaint filed in US District Court (Eugene)	BLM Decision affirmed in U.S. District Court for the District of Oregon on Oct. 17, 2011
Tioga Bridge	Recreation Project	N/A		Rob and Jana Bowler appeal filed in 9 th Circuit Court of Appeals	Pending

Resource Management Plan Revision

The BLM completed an RMP revision effort in December 2008. The Secretary of the Interior withdrew the 2008 RODs/RMPs in July, 2009 and the districts reverted to implementing the 1995 RMPs.

On March 31, 2011, the United States District Court for the District of Columbia vacated and remanded the Secretary of the Interior’s decision to withdraw the 2008 RODs/RMPs (Douglas Timber Operators et al. v. Salazar) effectively returning the districts to the 2008 RMPS.

Plaintiffs in the Pacific Rivers Council V. Shepard litigation filed a partial motion for summary judgment in the U.S. District Court for the District of Oregon on Endangered Species Act (ESA) claims and requested the court to vacate and remand the 2008 RODs/RMPs. A magistrate judge issued findings and recommendations on September 29, 2011 and recommended granting the Plaintiffs motion for partial summary judgment on their ESA claim. The Court recommends setting aside the agency action, vacating the 2008 RODs and reinstating the Northwest Forest Plan as the appropriate remedy. The Court will review and rule on any objections prior to issuing a final order.

Given the current uncertainty surrounding planning in western Oregon, The Roseburg District has designed projects to conform to both the 2008 ROD/RMP and the 1995 ROD/RMP. Consequently, projects have been consistent with the goals and objectives in both the 1995 RMP and 2008 RMP.

Archived information regarding the plan revision is available online at: <http://www.blm.gov/or/plans/wopr/plan-doc-overview.php>

Resource Management Plan Evaluations

Periodic evaluations of land use plans and environmental review procedures are required by the Bureau's planning regulations (43 Code of Federal Regulations (CFR), Part 1610.4-9) to determine the status of ongoing plan implementation, conformance and monitoring.

A formal Resource Management Plan evaluation of the Roseburg District ROD/RMP was completed in fiscal year 2000 for the period of 1995 through 1998. A subsequent Roseburg District evaluation was also conducted in 2004. These evaluations reviewed the cumulative progress for implementing and meeting the objectives of the ROD/RMP. The evaluation determined that, with the exception of a few program areas, all ROD/RMP management actions/direction were being implemented with a high degree of fidelity and that ROD/RMP objectives were being met or would be met. An exception to this was the ability of the Roseburg District to fully implement the timber program. Information regarding the timber program shortfall is summarized in this APS.

An evaluation of the Roseburg District ROD/RMP relative to four northern spotted owl reports was completed in fiscal year 2005. This evaluation reviewed and summarized recent key findings regarding the Northern spotted owl and compared these findings to the analysis contained within the Roseburg PRMP/EIS and the Final Supplemental Environmental Impact Statement on the Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (USDA, USDI 1994). BLM determined that the effects to Northern spotted owl populations identified in the new reports were within those anticipated in the PRMP/EIS. BLM finds that "the goals and objectives of the ROD/RMP are still achievable... the latest information on the Northern spotted owl does not warrant a change in ROD/RMP decisions pertinent to the Northern spotted owl, and therefore does not warrant amendment or revision of the Roseburg District ROD/RMP. Therefore, the "underlying analysis in the EIS remains adequate for purposes of tiering NEPA analyses of Northern spotted owl effects from proposed actions implementing NEPA".

This evaluation is on file at the Roseburg District Office, 777 NW Garden Valley Blvd., Roseburg, Oregon.

Plan Maintenance

The Roseburg ROD/RMP was approved in June 1995. Since that time, the Roseburg District has implemented the plan across the entire spectrum of resources and land use allocations. As the plan is implemented, it sometimes becomes necessary to make minor changes, refinements, or clarifications of the plan which may take the form of maintenance actions. Maintenance actions respond to minor data changes and incorporation of activity plans and are limited to further refining or documenting a previously approved decision incorporated in the plan. Plan maintenance will not result in expansion of the scope of resource uses or restrictions or change the terms, conditions and decisions of the approved resource management plan. Maintenance actions are not considered a plan amendment and do not require the formal public involvement and interagency coordination process undertaken for plan amendments. Important plan maintenance will be documented in the Roseburg District Planning Update and Roseburg District APS. Two examples of possible plan maintenance issues that would involve clarification may include the level of accuracy of measurements needed to establish Riparian Reserve widths and measurement of coarse woody debris. Much of this type of clarification or refinement involves issues that have been examined by the Regional Ecosystem Office and contained in subsequent

instruction memos from the BLM Oregon State Office. Depending on the issue, not all plan maintenance issues will necessarily be reviewed and coordinated with the Regional Ecosystem Office or Provincial Advisory Committee. Plan maintenance is also described in the Roseburg District Resource Management Plan Record of Decision, page 79.

The following items have been implemented on the Roseburg District as part of plan maintenance. Some are condensed descriptions of the plan maintenance items and do not include all of the detailed information contained in the referenced instruction or information memos. These plan maintenance items represent minor changes, refinements or clarifications that do not result in the expansion of the scope of resource uses or restrictions or change the terms, conditions and decisions of the approved resource management plan.

Plan Maintenance for fiscal year 1996

1. Refinement of management direction pertaining to riparian reserves.

Standard of accuracy for measuring Riparian Reserve widths. (NFP Record of Decision page B-13, Roseburg ROD/RMP page 23)

As reviewed by the Regional Ecosystem and Research, and Monitoring Committee; a reasonable standard of accuracy for measuring Riparian Reserve widths in the field for management activities is plus or minus 20 feet or plus or minus 10 percent of the calculated width.

2. Refinement of management direction pertaining to Riparian Reserves.

Determining site-potential tree height for Riparian Reserve widths. NFP Record of Decision page C-31, Roseburg ROD/RMP page 24)

According to the NFP Record of Decision, and the Roseburg District ROD/RMP, "site potential tree height is the average maximum height of the tallest dominant trees (200 years or older) for a given site class." As reviewed by the Regional Ecosystem Office and as set forth by Instruction Memo OR-95-075, the Roseburg District will determine site-potential tree height for the purpose of establishing Riparian Reserve widths by the following steps:

- Determine the naturally adapted tree species which is capable of achieving the greatest height within the fifth field watershed and/or stream reach in question;
- Determine the height and age of dominant trees through on-site measurement or from inventory data (Continuous Forest Inventory Plots)

Average the site index information across the watershed using inventory plots, or well-distributed site index data, or riparian-specific derived data where index values have a large variation;

Select the appropriate site index curve;

Use Table 1 (included in Instruction Memo OR-95-075) to determine the maximum tree height potential which equates to the prescribed Riparian Reserve widths.

Additional detail concerning site potential tree height determination is contained in the above referenced instruction memo. Generally, the site potential tree heights used on the Roseburg District are usually in the vicinity of 160 to 200 feet.

3. Minor change and refinement of management direction pertaining to coarse woody debris in the matrix.

Coarse woody debris requirements. (NFP Record of Decision page C-40, Roseburg ROD/RMP pages 34, 38, 65)

As recommended by the Research and Monitoring Committee and as reviewed and forwarded by the Regional Ecosystem Office, the Roseburg District will use the following guidelines in meeting the coarse woody debris requirements (leave 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 feet long) in the General Forest Management Area and Connectivity/Diversity Blocks.

- In determining compliance with the linear feet requirements for coarse woody debris, the Roseburg District will use the measurement of the average per acre over the entire cutting unit, or total across the unit.
- Log diameter requirements for coarse woody debris will be met by measuring logs at the large end.
- Interdisciplinary teams will establish minimum coarse woody debris requirements on each acre to reflect availability of coarse woody debris and site conditions.
- During partial harvests early in rotational cycle, it is not necessary to fall the larger dominant or codominant trees to provide coarse woody debris logs.
- Count decay class 1 and 2 tree sections greater than or equal to 30 inches in diameter on the large end that are between 6 feet and 16 feet in length toward the 120 linear feet requirement

In addition, the coarse woody debris requirements have been further refined in cooperation with the Southwest Oregon Province Advisory Committee, a diverse group of land managers and interest groups with representation from Federal land management and regulatory agencies, state and local government, timber industry, recreation, environmental, conservation, fishing, mining, forest products, grazing, and tribal interests. After this refinement has been implemented for one year, the Province Advisory Committee will evaluate the results.

This process for determining coarse woody debris requirements, which is described in seven steps, is anticipated to be a very simple process that an interdisciplinary team will follow when planning projects that may impact levels of coarse woody debris. New prescriptions will be only for the project being planned.

(Note: This plan maintenance refinement was in effect for one year and was not renewed.)

4. Minor change in management direction pertaining to lynx.

Change in specific provisions regarding the management of lynx. (NFP Record of Decision pages C-5, C-45, C-47 C-48; Roseburg ROD/RMP pages 45, 46, and 47).

This documents an Oregon State Director decision to implement through plan maintenance of the western Oregon BLM resource Management Plans a Regional Interagency Executive Committee decision.

This refinement of lynx management consists of the changing the survey and manage lynx requirements from survey prior to ground disturbing activities to extensive surveys. Implementation schedule is changed from surveys to be completed prior to ground disturbing activities that will be implemented in fiscal year 1999 to surveys must be under way by 1996. Protection buffer requirements for lynx are unchanged.

These changes simply resolve an internal conflict within the Northwest Forest Plan Record of Decision and Roseburg Resource Management Plan.

5. Minor change in standards and guidelines for *Buxbaumia piperi*

On July 26, 1996, the Oregon State Director issued a minor change in the standards and guidelines or management action direction in the ROD/RMP for *Buxbaumia piperi* (a species of moss) through plan maintenance. The State Director's action "maintained" the Roseburg, Salem, Eugene, Medford, and Klamath Falls Resource Management Plans. Simultaneously, the Forest Service issued Forest Plan corrections for 13 National Forests in the Northwest to accomplish the same changes.

This plan maintenance action removes *B. piperi* as Protection Buffer species. This change corrects an error in which mitigation measures described on page C-27 of the Northwest Forest Plan Record of Decision and on page 44 of the Roseburg District ROD/RMP were incorrectly applied to *B. Piperi*.

B. piperi was addressed in the Scientific Analysis Team (SAT) report published in 1993. The Northwest Forest Plan Record of Decision included some Protection Buffer species sections from the SAT report. The SAT Protection Buffer species status was developed to improve the viability of species considered at risk. Although *B. piperi* is not rare, it was apparently carried forward as a Protection Buffer species because it was rated with a group of rare mosses that occupy similar habitat.

This plan maintenance is supported by staff work and information from the Survey and Manage Core Team, and the expert panel of Pacific Northwest specialists on bryophytes, lichens and fungi that participated in the Scientific Analysis Team process.

6. Minor change/correction concerning mountain hemlock dwarf mistletoe

Appendix H-1 of the Roseburg ROD/RMP indicated that *Aruethobium tsugense* was to be managed under survey strategies 1 and 2. The Regional Ecosystem Office later determined mountain hemlock dwarf mistletoe to be common and well distributed in Oregon, and recommended that *Aruethobium tsugense* subsp. *Mertensiana* be managed as a survey strategy 4 species in Washington only. This information was received in OSO Information Bulletin OR-95-443 and is adopted as ROD/RMP clarification.

Plan Maintenance for fiscal year 1997

1. Correction of typographical errors concerning understory and forest gap herbivore arthropods.

Appendix H, Table H-1, page 186 of the Roseburg ROD/RMP "Anthropods" is changed to "Arthropods". "Understory and forest gap herbivores" is changed to "Understory and forest gap herbivores (south range)". Information from Oregon State Office Information Bulletin OR-97-045.

2. Clarification of implementation date requirement for Survey and Manage component 2 surveys.

The S&G on page C-5 of the NFP ROD states “implemented in 1997 or later”, the NFP ROD, page 36 states “implemented in fiscal year 1997 or later”. In this case where there is a conflict between specified fiscal year (ROD page 36) and calendar year (S&G page C-5) the more specific fiscal year date will be used over the non-specific S&G language. Using fiscal year is the more conservative approach and corresponds to the fiscal year cycle used in project planning and, also, to the subsequent reference to surveys to be implemented prior to fiscal year 1999. Information from Oregon State Office Instruction Memorandum OR-97-007.

3. Clarification of what constitutes ground disturbing activities for Survey and Manage component 2.

Activities with disturbances having a likely “significant” negative impact on the species habitat, its life cycle, microclimate, or life support requirements should be surveyed and assessed per protocol and are included within the definition of “ground disturbing activity”.

The responsible official should seek the recommendation of specialists to help judge the need for a survey based on site-by-site information. The need for a survey should be determined by the line officer’s consideration of both the probability of the species being present on the project site and the probability that the project would cause a significant negative effect on its habitat. Information from Oregon State Office Instruction Memo OR-97-007.

4. Clarification when a project is implemented in context of component 2 Survey and Manage.

S&G C-5 of NFP ROD and Management Action/Direction 2.c., page 22 of the ROD/RMP ROD states that “surveys must precede the design of activities that will be implemented in [fiscal year] 1997 or later.” The interagency interpretation is that the “NEPA decision equals implemented” in context of component 2 species survey requirements. Projects with NEPA decisions to be signed before June 1, 1997 have transition rules that are described in IM OR-97-007. Information from Oregon State Office Instruction Memorandum OR-97-007.

5. Conversion to Cubic Measurement System.

Beginning in fiscal year 1998 (October 1997 sales), all timber sales (negotiated and advertised) will be measured and sold based upon cubic measurement rules. All timber sales will be sold based upon volume of hundred cubic feet (CCF). The Roseburg District ROD/RMP declared an allowable harvest level of 7.0 million cubic feet. Information from Oregon State Office Instruction Memorandum OR-97-045.

6. Clarification of retention of coarse woody debris.

The NFP ROD S&G, page C-40 concerning retention of existing coarse woody debris states: “Coarse Woody Debris already on the ground should be retained and protected to the greatest extent possible...” The phrase “to the greatest extent possible” recognizes felling, yarding, slash treatments, and forest canopy openings will disturb coarse woody debris substrate and their dependent organisms. These disturbances should not cause substrates to be removed from the logging area nor should they curtail treatments. Reservation of existing decay class 1 and 2 logs, in these instances, is at the discretion of

the District. Removal of excess decay class 1 and 2 logs is contingent upon evidence of appropriately retained or provided amounts of decay class 1 and 2 logs.

Four scenarios are recommended to provide the decay class 1 and 2 material by using standing trees for coarse woody debris:

Scenario 1. Blowdown commonly occurs and wind normally fells retention trees, providing both snags and coarse woody debris immediately following regeneration harvest. After two winter seasons, wind firm trees may still be standing; top snap occurs providing both snags and coarse woody debris; and blowdowns include total tree length, often with the root wad attached. A third year assessment would monitor for coarse woody debris and determine if the need exists to fell trees to meet the required linear feet.

Scenario 2. In small diameter regeneration harvest stands, the largest sized green trees are selected as coarse woody debris and felled following harvest. The alternative is to allow these trees to remain standing and potentially to grow into larger sized diameter coarse woody debris substrate after a reasonable period of time.

Scenario 3. The strategy is to meet the decay class 1 and 2 log level required post-harvest immediately following logging or the site preparation treatment period. This strategy assumes that an adequate number of reserve trees are retained to meet the requirement. Upon completion of harvest, the existing linear feet of decay class 1 and 2 logs for each sale unit are tallied; and then the reserve trees are felled to meet the 120 feet linear foot requirement. Knockdowns, trees felled to alleviate a logging concern, and blowdowns are counted toward the total linear feet so long as they meet the decay class, diameter, and length requirements. The minimum amount of coarse woody debris linear feet are ensured, and excess trees continue to grow.

Scenario 4. Provide the full requirement of coarse woody debris in reserve trees. There is no need to measure linear feet since the decay class 1 and 2 requirements will be met from the standing, reserved trees. Accept whatever linear feet of decay class 1 and 2 logs are present on the unit post-harvest. The management action will be to allow natural forces (primarily windthrow) to provide infusions of trees into coarse woody debris decay classes 1 and 2 over time from the population of marked retention trees and snag replacement trees.

Large diameter logs which are a result of felling breakage during logging but are less than 16 feet long may be counted towards the linear requirement when:

- the large end diameters are greater than 30 inches and log length is greater than 10 feet
- log diameters are in excess of 16 inches and volume is in excess of 25 cubic feet.
- they are the largest material available for that site.

The above information for clarification of coarse woody debris requirements is from Oregon State Office Instruction Memo OR-95-28, Change 1, and Information Bulletin OR-97-064.

7. Clarification of insignificant growth loss effect on soils.

Management action/direction contained in the ROD/RMP pages 37 and 62 states that “In forest management activities involving ground based systems, tractor skid trails including existing skid trails,

will be planned to have insignificant growth loss effect. This management action/direction was not intended to preclude operations in areas where previous management impacts are of such an extent that impacts are unable to be mitigated to the insignificant (less than 1 percent) level. In these cases, restoration and mitigation will be implemented as described in the ROD/RMP management action/direction and best management practices such that growth loss effect is reduced to the extent practicable.

Plan Maintenance for fiscal year 1998

1. Refinement of 15 percent Retention Management Action/Direction.

Guidance on implementation of the 15 percent retention management action/direction which provides for retention of late-successional forests in watersheds where little remains. A joint BLM-USFS guidance which incorporated the Federal executives' agreement was issued on September 14, 1998, as BLM Instruction Memorandum No. OR-98-100. This memo clarifies and refines the standard and guideline contained in the Northwest Forest Plan and ROD/RMP that directs that in fifth field watersheds in which Federal forest lands are currently comprised of 15 percent or less late-successional forest should be managed to retain late-successional patches. The memo emphasizes terminology and intent related to the standard and guideline, provides methods for completing the assessment for each fifth field watershed, dictates certain minimum documentation requirements and establishes effective dates for implementation. Instruction Memo OR-98-100 is adopted in its entirety as ROD/RMP clarification and refinement.

2. Clarification of Visual Resource Management Action/Direction.

Management Action/Direction for Visual Resources has been found to be unclear due to internal inconsistency. The Roseburg ROD/RMP includes management action/direction in addition to that which is common to all other western Oregon BLM Districts. The prescriptive management action/direction unique to the Roseburg District ROD/RMP has been found too difficult to implement in a logical and consistent manner. The management action/direction for visual resources is refined by the deletion of five paragraphs that discuss harvest scenarios on page 53 of the ROD/RMP. This refinement does not result in the expansion of the scope of resource uses and allows the Roseburg District ROD/RMP to be consistent with other western Oregon BLM ROD/RMPs.

Plan Maintenance for fiscal year 1999

1. Refinement of Survey and Manage Management Action/Direction.

Ongoing plan maintenance has resulted from the refinement and clarification related to the survey and manage management action/direction (Roseburg ROD/RMP page. 22). Survey and manage gives direction for hundreds of species and taxa. The management recommendations and survey protocols for these species are received through Instruction Memoranda which are jointly issued by the BLM and Forest Service through coordination with the Regional Ecosystem Office. In fiscal year 1999, survey protocols were established for lynx (IM No. OR-99-25), and fifteen vascular plants (IM No. OR-99-26). Management recommendations were received for fifteen vascular plants (IM No. OR-99-27), nineteen aquatic mollusk species (IM No. OR-99-38), and five bryophyte species (IM No. OR-99-39). In addition, a change in the implementation schedule for certain survey and manage and protection buffer species was issued (IM No. OR 99-47). This schedule change was analyzed through an environmental assessment.

Plan Maintenance for fiscal year 2000

1. Refinement of Survey and Manage Management Action/Direction.

Ongoing plan maintenance has continued as in fiscal year 2000 regarding survey and manage management action/direction with the establishment of management recommendations and survey protocols through jointly issued Instruction Memoranda by the BLM and Forest Service in coordination with the Regional Ecosystem Office. In fiscal year 2000, survey protocols were established for amphibians (IM No. OR-200-04), bryophytes (IM No. OR-2000-17, IM No. OR-2000-17 change 1), fungi (IM No. OR-2000-18), and the red tree vole (IM No. OR-2000-37). Management recommendations were received for mollusks (IM No. OR-2000-03, IM No. OR-2000-15), and lichens (IM No. OR-2000-42). These instruction memorandums may be found at the Oregon State Office web site under “Northwest Forest Plan” (<http://web.or.blm.gov/>)

2. Clarification of ACEC/RNAs closed to motorized use.

Bushnell-Irwin Rocks ACEC/RNA was inadvertently omitted from the list of ACEC/RNAs that are closed to motorized use on page 59 of the ROD/RMP. ACEC/RNAs are closed to motorized use on page 51 of the ROD/RMP and Bushnell-Irwin Rocks ACEC/RNA is listed as closed to motorized use in the Roseburg District Off-Highway Vehicle Implementation Plan. This plan maintenance eliminates this inconsistency and clarifies that Bushnell-Irwin Rocks ACEC/RNA is closed to motorized use.

3. Refinement and clarification of Best Management Practices (ROD/RMP Appendix D.) related to site preparation using prescribed burning.

Through an interdisciplinary process, the Roseburg District has determined that the objective of maintaining soil productivity could be better accomplished through refinement and clarification of Best Management Practices related to site preparation using prescribed burning.

For the purposes of this plan maintenance, the Best Management Practices language found on pages 139-140 of the ROD/RMP ROD, III.B.1 through 9 and III. D.1. is replaced by the following:

(III.C. and D.2 to end remain unchanged):

B. Site Preparation Using Prescribed Burning

Objectives: To maintain soil productivity and water quality while meeting resource management objectives.

a. Machine pile and burn:

1. Limit the use of mechanized equipment to slopes less than 35 percent.
2. Do not compact skeletal or shallow soils.
3. Keep total surface area of soil compaction (greater than 15 percent bulk density increase in a greater than 4 inch thick layer) to a maximum of 10 percent of machine piled area (prior to tillage).

4. Till all compacted areas with a properly designed winged subsoiler. This could be waived if less than 2 percent of the machine piled area is compacted.
 5. Materials to be piled will be 16 inches in diameter or less.
 6. Burn when soil and duff moisture between piles is high.
 7. Avoid displacement of duff and topsoil into piles.
 8. Highly sensitive soils are all soils less than 20 inches deep, soils with less than 4 inches of "A" horizon, granite and schist soils on slopes greater than 35 percent and other soils on slopes greater than 70 percent. These soils are referred to as category 1 soils. On highly sensitive (category 1) soils, machine pile and burn treatments considered to be essential to meet resource management objectives will be designed to minimize consumption of litter, duff, and large woody debris. Mineral soil exposed by the burn will be less than 15 percent of the unit surface area.
- b. Hand pile and burn, swamper burning:
1. Pile small materials (predominately 1 - 6 inches in diameter).
 2. Burn when soil and duff moisture between piles is high.
 3. Only pile areas where loading (depth and continuity) require treatment to meet management objectives.
 4. On highly sensitive (category 1) soils, hand pile and burn (and swamper burn) treatments considered to be essential to meet resource management objectives will be designed to minimize consumption of litter, duff, and large woody debris. Mineral soil exposed by the burn will be less than 15 percent of unit surface area.
- c. Broadcast burning:
1. Burn under conditions that result in lightly to moderately burned area, minimizing consumption of duff and large woody debris. This typically occurs when soil and duff moisture is high.

Lightly burned: The surface duff layer is often charred by fire but not removed. Duff, crumbled wood or other woody debris partly burned, logs not deeply charred.

Moderately burned: Duff, rotten wood or other woody debris partially consumed or logs may be deeply charred but mineral soil under the ash not appreciably changed in color.

Severely burned: Top layer of mineral soil significantly changed in color, usually to reddish color, next one-half inch blackened from organic matter charring by heat conducted through top layer.
 2. When feasible, pull slash and woody debris adjacent to landing onto landing before burning.

3. On highly sensitive (category 1) soils, broadcast burning treatments considered essential to meet resource management objectives will be designed to minimize consumption of litter, duff, and large woody debris. Mineral soil exposed by the burn will be less than 15 percent of the unit surface area.

d. Clarification of what roads shall be included as a starting point to monitor the reduction of road mileage within key watersheds.

Guidance on how to define the baseline roads or the discretionary ability to close roads was not included in the ROD/RMP Management Action/Direction for Key Watersheds. Information Bulletin OR-2000-134 issued on March 13, 2000, clarified what roads shall be included in the 1994 BLM road inventory base used as a starting point to monitor the “reduction of road mileage within Key Watersheds” as follows:

Any road in existence on BLM administered land as of April 1994, regardless of ownership or whether it was in the road records, shall be included in the 1994 base road inventory. Also, include BLM-controlled roads on non-BLM administered lands. A BLM controlled road is one where the BLM has the authority to modify or close the road. Do not include skid roads/trails, as technically they are not roads.

Plan Maintenance for fiscal year 2001

1. Refinement of implementation monitoring question regarding Survey and Manage management action/direction.

As a result of the modifications to the Survey and Manage management action/direction (standards and guidelines) through the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines in January 2001, it is necessary to refine the implementation monitoring questions associated with this standard and guideline. Implementation monitoring question number one for All Land Use Allocations has been modified to read: “Is the management action for the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines being implemented as required?”

2. Refinement of implementation monitoring questions regarding Special Status Species. The implementation monitoring question regarding Special Status Species were found to contain redundancies with the Survey and Manage monitoring questions. The redundancies have been eliminated by removing Survey and Manage questions from Special Status Species. Survey and Manage monitoring is fully accomplished through the implementation question under All Land Use Allocations. In addition, implementation monitoring question number one for Special Status Species was basically redundant with question number two and therefore question number one was eliminated. The title for this monitoring section has been modified to delete reference to SEIS Special Attention Species (Survey and Manage).
3. Refinement and clarification of objectives, management action/direction and implementation monitoring question regarding soils resource.

The management action/direction for the Soils Resource is different than that for any other resource in that it combines ROD/RMP objectives with management action/direction. Experience in ROD/RMP monitoring has disclosed difficulty in effectively measuring the accomplishment of Soils Resource

management action/direction. The District Soil Scientist and Geotechnical Engineer have examined this issue from a technical perspective in the field and recently published literature has been reviewed. The technical review and recent literature indicates that operational monitoring which would produce meaningful and reliable results of the current soils management action/direction as currently written is not practical.

The ROD/RMP is clarified and refined in the following manner:

The ROD/RMP objective to “improve and/or maintain soil productivity” (ROD/RMP pg. 35) is retained.

The *objective* of “insignificant growth loss effect” (ROD/RMP pg. 37) and “insignificant (less than one percent) growth loss effect” (ROD/RMP pg 62) is removed from management action/direction. The intention and purpose of this *objective* which was combined with management action/direction is preserved in the existing language of the ROD/RMP objectives for the soil resource.

The entire management action/direction contained in the fourth paragraph page 37 (beginning “In forest management activities. . .”) and the second paragraph page 62 (beginning “Plan timber sales. . .”) is replaced by:

“For forest management activities involving ground based systems, improve or maintain soil productivity by:

- a.) the cumulative (created or used since the adoption of the ROD/RMP) main skid trails, landings and large pile areas will affect less than approximately 10 percent, of the ground based harvest unit
- b.) a main skid trail is defined as a trail in which the duff is displaced such that approximately 50 percent or more of the surface area of the trail is exposed to mineral soil
- c.) skid trails which were created prior to the adoption of the ROD/RMP should be re-used to the extent practical, such skid trails that are re-used will be included in the 10 percent limit of affected area within the ground based harvest unit
- d.) limit skid trails to slopes generally less than approximately 35 percent. Examples of exceptions to the 35 percent slope limit would include situations such as small inclusions of steeper slopes, connecting trails to isolated ground based harvest areas, or the use of existing trails that can be used without causing undue effects to soils
- e.) in partial cut areas, locate main skid trails so that they may be used for final harvest
- f.) conduct ground based operations only when soil moisture conditions limit effects to soil productivity (these conditions generally can be expected to be found between May 15 and the onset of regular fall rains or may be determined by on-site examination)
- g.) on intermediate harvest entries, ameliorate main skid trails and areas of non-main skid trails warranting amelioration, or document a plan (e.g. such as adding a map to watershed analysis) so that amelioration may be accomplished at the time of final harvest
- h.) potential harvest units will be examined during the project planning process to determine if skid trails created prior to the adoption of the ROD/RMP have resulted in extensive enough compaction to warrant amelioration
- i.) upon final harvest ameliorate all main skid trails, those portions of non-main skid trails warranting amelioration, skid trails documented and carried over from intermediate harvests, and skid trails created prior to the adoption of the ROD/RMP which were identified in the planning process as warranting amelioration

- j.) amelioration of skid trails will generally consist of tilling with equipment designed to reduce the effects to soil productivity from compaction and changes in soil structure.

For mechanical site preparation, management action/direction is refined as follows:

The fourth condition under which track-type equipment must operate (ROD/RMP pg 63, beginning: “4. Operate at soil moistures that. . .”) is replaced with:

4. Conduct mechanical site preparation when soil moisture conditions limit effects to soil productivity (these conditions generally can be expected to be found between May 15 and the onset of regular fall rains or may be determined by on-site examination). Total exposed mineral soil resulting from main skid trails and mechanical site preparation activities will be less than 10 percent of the ground based harvest unit area. Total exposed mineral soil as a result of mechanical site preparation in cable or helicopter harvest units will be less than approximately 5 percent of harvest unit area. Units will be examined after site preparation has been completed to determine if amelioration (generally tilling) is warranted to reduce the effects to soil productivity from compaction and changes in soil structure.”

Implementation monitoring question number six for Water and Soils is changed to: “Have forest management activities implemented the management direction for ground based systems and mechanical site preparation as listed in the fiscal year 2001 plan maintenance?”

5. Refinement of Resource Management Plan evaluation interval.

The ROD/RMP (pages 78 and 79), in the Use of the Completed Plan section, established a three year interval for conducting plan evaluations. The purpose of a plan evaluation is to determine if there is significant new information and/or changed circumstance to warrant amendment or revision of the plan. The ecosystem approach of the ROD/RMP is based on long term management actions to achieve multiple resource objectives including; habitat development, species protection, and commodity outputs. The relatively short three year cycle has been found to be inappropriate for determining if long term goals and objectives will be met. A five year interval is more appropriate given the resource management actions and decisions identified in the ROD/RMP. The Annual Program Summaries and Monitoring Reports continue to provide the cumulative ROD/RMP accomplishments. Changes to the ROD/RMP continue through appropriate amendments and plan maintenance actions. A five year interval for conducting evaluations is consistent with the BLM planning guidance as revised in November 2000.

The State Director decision to change the evaluation interval from three years to five years was made on March 8, 2002. It was directed that this plan maintenance be published in the 2001 Annual Program Summary. The next evaluation of the Roseburg District Resource Management Plan will address implementation through September 2003.

2001 Amendment to the Northwest Forest Plan

The Survey and Manage mitigation in the Northwest Forest Plan was amended in January 2001 through the signing of the Record of Decision (ROD) for the Final Supplemental Environmental Impact Statement for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. The intent of the amendment was to incorporate up-to-date science into management of Survey and Manage species and to utilize the agencies’ limited resources more efficiently. The ROD provides approximately the same level of protection intended in the Northwest Forest Plan but eliminates inconsistent

and redundant direction and establishes a process for adding or removing species when new information becomes available.

The ROD reduced the number of species requiring the Survey and Manage mitigation, dropping 72 species in all or part of their range. The remaining species were then placed into 6 different management categories, based on their relative rarity, whether surveys can be easily conducted, and whether there is uncertainty as to their need to be included in this mitigation. Table 22 shows a breakdown of the placement of these species, and a brief description of management actions required for each. However, in 2011 the Settlement Agreement in *Conservation Northwest et al. v. Sherman et al.* (Case No. 08-CV-1067-JCC [W.D. Wash.]) updated the 2001 Survey and Manage species list. The 2011 updates to the Survey and Manage species list and the categorization of species are reflected in Table 23 and not the species categorization as it was in 2001.

Table 22. Redefined Categories Based on Species Characteristics

Relative Rarity	Pre-disturbance Surveys Practical	Pre-disturbance Surveys not Practical	Status Undetermined Pre-disturbance Surveys Not Practical
Rare	Category A-57 species <ul style="list-style-type: none"> • Manage all known sites • Pre-disturbance surveys • Strategic surveys 	Category B – 222 species <ul style="list-style-type: none"> • Manage all known sites • N/A • Strategic surveys 	Category E – 22 species <ul style="list-style-type: none"> • Manage all known sites • N/A • Strategic surveys
Uncommon	Category C – 10 species <ul style="list-style-type: none"> • Manage high priority sites • Pre-disturbance surveys • Strategic surveys 	Category D – 14 species <ul style="list-style-type: none"> • Manage high priority sites • N/A • Strategic surveys 	Category F – 21 species <ul style="list-style-type: none"> • N/A • N/A • Strategic surveys

The ROD identifies species management direction for each of the above categories. Uncommon species categories C and D require the management of “high priority” sites only, while category F requires no known site management. The new Standards and Guidelines also establish an in-depth process for reviewing and evaluating the placement of species into the different management categories. This process allows for adding, removing, or moving species around into various categories, based on the new information acquired through our surveys.

Approval of the Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines amended the Standards and Guidelines contained in the Northwest Forest Plan Record of Decision related to Survey and Manage, Protection Buffers, Protect Sites from Grazing, Manage Recreation Areas to Minimize Disturbance to Species, and Provide Additional Protection for Caves, Mines, and Abandoned Wooden Bridges and Building That are Used as Roost Sites for Bats. These standards and guidelines were removed and replaced by the contents of the Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standard and Guidelines.

Plan Maintenance actions to delete all references to Management Action/Direction for Survey and Manage and Protection Buffer species in the Roseburg District Resource Management Plan and Appendices and adopt the Standards and Guidelines contained in the *Record of Decision and Standards and Guidelines for Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures* are required in response to the Record of Decision.

Copies of the ROD and Final SEIS may be obtained by writing the Regional Ecosystem Office at PO Box 3623, Portland, Oregon 97208, or they can be accessed at <http://www.or.blm.gov/nwfpnepa>.

Plan Maintenance for fiscal year 2002

1. This plan maintenance revises the formal evaluation cycle for the ROD/RMP from a three year cycle to a five year cycle.

The ROD/RMP, in the Use of the Completed Plan section, established a three year interval for conducting plan evaluations. The purpose of a plan evaluation is to determine if there is significant new information and/or changed circumstances to warrant amendment or revision of the plan. The ecosystem approach of the ROD/RMP is based on long term management actions to achieve multiple resource objectives including habitat development, species protection and commodity outputs. The relatively short three year cycle has been found to be inappropriate for determining if long term goals and objectives will be met. A five year interval is more appropriate given the resource management actions and decisions identified in the ROD/RMP. The Annual Program Summaries and Monitoring Reports continue to provide the cumulative ROD/RMP accomplishments. Changes to the ROD/RMP will continue through appropriate plan amendments and plan maintenance actions. A five year interval for conducting evaluations is consistent with the BLM Land Use Planning Handbook.

The State Directors decision to change the evaluation interval from three years to five years was made on March 8, 2002. The next evaluation for the Roseburg District ROD/RMP will address implementation through September 2003.

2. For Survey and Manage standards and guidelines, Survey Protocols, Management Recommendations, changes in species categories or removal of species from Survey and Manage are issued and conducted in accordance with the Amendment to Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines Record of Decision of January 2002. These changes are transmitted through Instruction Memoranda from the Oregon State Office. These Instruction Memoranda are numerous and complex and would be unwieldy to list individually. All such Instruction Memoranda regarding the Survey and Manage Survey Protocols, Management Recommendations or changes in species status are incorporated as ongoing plan maintenance.
3. The management action/direction for Wild Turkey Habitat contained on page 39 of the ROD/RMP is removed. This refinement in the ROD/RMP recognizes that the Rio Grande wild turkey is an introduced species that is not only thriving but in many areas the large numbers of wild turkeys have become a nuisance and have required relocation by the Oregon Department of Fish and Wildlife. This management action/direction is, therefore, removed because it is not needed for this species.
4. The management action/direction for Roosevelt elk contained on page 39 of the ROD/RMP is removed. This refinement in the ROD/RMP recognizes that a combination of other management action/direction and land ownership patterns has resulted in achieving a thriving population of Roosevelt elk. Road closures for the benefit of elk populations have been found to be either unnecessary or accomplished through decommissioning or closure of roads for the purposes of watershed health. Limitation of the size of harvest units, distance to cover and minimum width of cover are being accomplished through the need to meet other aspects of the ROD/RMP including Riparian Reserves, survey and manage species requirements, Special Status Species requirements, threatened or endangered species requirements

and watershed considerations. Because of the thriving Roosevelt elk population it has not been found necessary to establish forage plots. Transplants of elk have not been found necessary to supplement existing numbers or to establish new local populations.

5. It is necessary to clarify the definition of an existing road for the purposes of road maintenance. Five road maintenance levels are assigned to roads. Roads which are assigned road maintenance Level I or Level 2 may, on occasion, have trees or other vegetation encroach on or become established within the road prism or on the road surface because of low traffic levels and an extended period between road maintenance. In such instances, road maintenance may be used to re-establish the utility of the road. It would not fit the definition of road maintenance to re-establish the utility of a road that has been closed through full decommissioning or obliteration and that has been removed from Roseburg District road records with approval from parties to existing road use agreements.

Plan Maintenance for fiscal year 2003

1. The ROD/RMP is maintained to correct an inconsistency between management action/direction and Federal Land Policy and Management Act (FLPMA) Section 203(a). All Westside ROD/RMPs were intended to be consistent with FLPMA Section 203(a), however, the Roseburg District ROD/RMP through an editing oversight is different in this respect. FLPMA Section 203(a) allows for disposal of lands through sales if they meet one of three criteria. The Roseburg ROD/RMP inadvertently added a requirement that land sales would, under certain circumstances, need to meet two of the three criteria (ROD/RMP page. 68).

The penultimate full paragraph on page 68 of the ROD/RMP is replaced as follows:

Sell BLM-administered lands under the authority of FLPMA Section 203(a) which requires that at least one of the following conditions exists before land is offered for sale:

The tract because if its location or other characteristics is difficult or uneconomical to manage as part of BLM-administered lands and is not suitable for management by another Federal department or agency.

The tract was acquired for a specific purpose and is no longer required for any Federal purpose. Disposal of the tract would serve important BLM objectives. These include but are not limited to:

- Expansion of communities and economic development which cannot be achieved prudently or feasibly on lands other than BLM-administered lands and which outweigh other public objectives.
- Values including but not limited to recreation and scenic values which would be served by maintaining such tract in Federal ownership.

Transfer land to other public agencies where consistent with public land management policy and where improved management efficiency would result.

Minor adjustments involving sales or exchanges may be made based on site-specific application of the land ownership adjustment criteria.

2. The actions that were intended for salvage under the Resource Management Plan are clarified as follows:

The Roseburg District ROD/RMP sets forth the Timber Objective of “Provide for salvage harvest of timber killed or damaged by events such as wildfire, windstorms, insects or disease, consistent with management objectives for other resources.” (ROD/RMP page 60).

For the General Forest Management Area and Connectivity/Diversity Blocks the ROD/RMP provides that “Silvicultural practices include the full range of practices consistent with the Land Use Allocations.” (ROD/RMP pages 150 and 151).

Additional direction is provided for salvage within Late-Successional Reserves and Riparian Reserves in the Resource Management Plan (ROD/RMP pages 153 and 154).

The full range of silvicultural practices, including those pertaining to salvage which were intended to be used in the Resource Management Plan are set forth in Appendix E of the ROD/RMP and are also found in Smith, David M. 1962 The Practice of Silviculture which was incorporated by reference. (ROD/RMP page 154).

Salvage cuttings are made for the primary purpose of removing trees that have been or are in imminent danger of being killed or damaged by injurious agencies other than competition between trees. (Smith 1962, page 210).

Sometimes the mortality caused by the attack of a damaging agency does not take place immediately. This is particularly true where surface fires have occurred because the main cause of mortality is the girdling that results from killing the cambial tissues. As with other kinds of girdling, the top of the tree may remain alive until the stored materials in the roots are exhausted. It is usually a year or more before the majority of the mortality has occurred. It is, therefore, advantageous to have some means of anticipating mortality before it has occurred. The predictions must be based on outward evidence of injury to the crown, roots or stem. (Smith 1962, page 212)

In salvage operations, in addition to dead trees, trees that are dying or at a high risk of mortality may also be harvested. Outward evidence of injury that may cause mortality includes, but is not limited to scorched crown, fire damage that girdles any part of the bole, substantial fire damage at or near the root collar, damage to roots, and indicators of insect attack.

Salvage harvest should include all trees that present a safety hazard to life or property.

All salvage harvest that occurs within an existing road rights-of-way will be conducted for the proper function, purpose and objectives of the rights-of-way. Salvage harvest outside of a rights-of-way will follow management action/direction for the appropriate land use allocation.

There is no requirement to meet green tree retention requirements for the matrix where the extent of dead and dying trees has made this impracticable. Green tree retention requirements in the Matrix will be met in salvage operations to the extent that healthy trees are available for retention.

3. The Beatty Creek Area of Critical Environmental Concern and Research Natural Area (ACEC/RNA) has been increased in size through acquisition of lands through a land exchange for the purpose of blocking up ownership and improving management opportunities. This action was anticipated in the Roseburg District Proposed Resource Management Plan Final Environmental Impact Statement (PRMP/EIS page 2-36) and is in accordance with management direction for the Beatty Creek ACEC/RNA set forth in the Roseburg District Record of Decision and Resource Management Plan (ROD/RMP page 50).

The Island Creek recreation site has been increased in size through acquisition of lands through a land exchange for the purpose of developing further recreational opportunities. This action was anticipated in the PRMP/EIS (page 2-43) and is in accordance with management direction for the Island Creek recreation site set forth in the Roseburg District Record of Decision and Resource Management Plan (ROD/RMP page 57).

The details regarding these actions are contained in the Beatty Creek/Island Creek Land Exchange environmental assessment (EA OR105-01-06, March 6, 2003) and associated decision record of March 17, 2003. This plan maintenance is effective as of the March 17 Decision Record.

4. From 1996 through 2003, the Roseburg District Monitoring Plan which is contained in Appendix I of the ROD/RMP has undergone a number of refinements and clarifications. These clarifications and refinements to the monitoring plan are part of adaptive management in which the monitoring questions that are no longer relevant are eliminated, needed questions are added or existing questions modified. These refinements all have the purpose to make monitoring as effective and relevant as possible.

The most recent refinement of the monitoring questions, in fiscal year 2003, has been to eliminate pre-implementation monitoring and to rely solely on post-implementation monitoring. This change has resulted from the adaptive management experience in which most projects that received pre-implementation monitoring were still not able to receive post-implementation monitoring as much as five years later because of protests and litigation. As a result, the monitoring information was no longer timely enough to be useful to management.

The current applicable monitoring questions are found in the most recent Annual Program Summary and Monitoring Report.

Ongoing District data base updates are incorporated as plan maintenance.

2004 Amendments to the Northwest Forest Plan including the Roseburg District ROD/RMP

Two amendments to the Northwest Forest Plan were made in 2004. These amendments were accomplished through separate environmental impact statements and records of decision.

Survey and Manage

The Survey and Manage standards and guidelines were removed from the plan through a Record of Decision of March 2004. The species that were included in the Survey and Manage standards and guidelines were referred to in the Roseburg ROD/RMP as "SEIS Special Attention Species". This decision will:

Continue to provide for diversity of plant and animal communities in accordance with the National Forest Management Act and conserve rare and little known species that may be at risk of becoming listed under the Endangered Species Act.

Reduce the Agencies' cost, time, and effort associated with rare and little known species conservation.

Restore the Agencies ability to achieve Northwest Forest Plan resource management goals and predicted timber outputs.

Aquatic Conservation Strategy

The provisions relating to the Aquatic Conservation Strategy (ACS) were clarified through a Record of Decision of March 2004. The Aquatic Conservation Strategy provisions had been interpreted to mean that decision makers must evaluate proposed site-specific projects for consistency with all nine ACS objectives, and that a project could not be approved if it has adverse short-term effects, even if the ACS objectives can be met at the fifth-field for larger scale over the long term. However, the ACS objectives were never intended to be applied or achieved at the site-specific (project) scale or in the short-term; rather they were intended to be applied and achieved at the fifth-field watershed and larger scales, and over a period of decades or longer rather than in the short-term. Indeed, failing to implement projects due to short-term adverse effects may frustrate the achievement of the goals of the ACS.

The decision clarifies the proper spatial and temporal scale for evaluating progress towards attainment of ACS objectives and clarifies that no-project-level finding of consistency with ACS objectives is required. The decision specifically reinforces the principle that projects must be considered in a long-term, fifth field watershed or larger scale to determine the context for project planning and National Environmental Policy Act (NEPA) effects analysis.

The decision will increase the ability of the Forest Service and the BLM to successfully plan and implement projects that follow Northwest Forest Plan principles and achieve all of the goals of the Northwest Forest Plan while retaining the original intent of the Aquatic Conservation Strategy.

Port-Orford-cedar

In February 2003, the U.S. District Court for the District of Oregon ruled that EIS for the Coos Bay District Resource Management Plan did not contain an adequate analysis of the effects of timber sales on the direct, indirect and cumulative impacts on Port-Orford-cedar and its root disease, *P. lateralis*. In order to correct this analysis deficiency and to ensure maintenance of Port-Orford-cedar as an ecologically and economically significant species on Federal lands, BLM and its co-lead and cooperating agencies prepared the January 2004 Final Supplemental Environmental Impact Statement (FSEIS). The Record of Decision for this FSEIS was issued in May 2004. The Record of Decision replaced existing management direction for Port-Orford-cedar with management direction that addresses research, monitoring, education, cooperation, resistance breeding and disease controlling management practices to reduce the spread of the root disease.

Plan Maintenance for fiscal year 2004

Refinement and clarification of requirements for marbled murrelet surveys.

This plan maintenance pertains only to the management of potential marbled murrelet nesting structure within younger stands and only to situations where thinning prescriptions are proposed.

This plan maintenance clarifies and refines ROD/RMP requirements that were intended to protect marbled murrelet nesting habitat from habitat modifications but were not intended to prohibit or discourage habitat modifications that would benefit murrelet conservation. Logic presented by the Level 1 Team clearly indicates that this plan maintenance would have a negligible effect on murrelets. This action encourages the enhancement of habitat immediately surrounding potential nesting structure.

Management direction for marbled murrelet is found on page 48 of the Roseburg District Record of Decision and Resource Management Plan. Plan maintenance is appropriate for this action because the action clarifies the intention of current ROD/RMP requirements for the murrelets and the biological information provided by the Level 1 Team indicates that this refinement of requirements will not result in an expansion of the scope of resource uses or restrictions.

Management direction found on page 48 of the Roseburg District ROD/RMP is refined through the addition of the following language:

If the following criteria are met, then the action is not considered a habitat disturbing activity and no surveys for marbled murrelet are required.

I. Characteristics of Potential nesting Structure

A tree with potential structure has the following characteristics:

It occurs within 50 miles (81 km) of the coast (U.S. Fish & Wildlife Service 1997:32) and below 2,925 ft. (900 m) in elevation (Burger 2002);

It is one of four species: Western hemlock, Douglas-fir, Sitka spruce or western red cedar (Nelson & Wilson 2002:24, 44);

It is ≥ 19.1 in. (49 cm) (dbh) in diameter, > 107 ft. (33 m) in height, has at least one platform ≥ 5.9 in. (15 cm) in diameter, nesting substrate (e.g., moss, epiphytes, duff) on that platform, and an access route through the canopy that a murrelet could use to approach and land on the platform (Burger 2002, Nelson & Wilson 2002:24, 27, 42, 97, 100);

And it has a tree branch or foliage, either on the tree with potential structure or on a surrounding tree, that provides protective cover over the platform (Nelson & Wilson 2002:98 & 99);

Any tree that does not meet all of these characteristics would be unlikely to support nesting murrelets.

Because murrelets respond to the landscape-level availability of nesting habitat (Burger 1997, Burger 2002, Cooper *et al.* 2001 and Raphael *et al.* 2002), a tree with potential structure might provide murrelet nesting habitat depending on where it occurs on the landscape.

Increasing distance from the ocean becomes a negative factor in murrelet inland site selection after 12-20 miles (19.5 – 32.5 km) (Anderson 2003, Burger 2002, Humes 2003, U.S. BLM 2003, Willamette Industries 2003 and Wilson 2002).

Habitat with < 6 trees with potential structure within a 5-acre area, and located > 20 miles (32.5 km) inland, has a negligible likelihood of use by nesting murrelets (Anderson 2003, Humes 2003, U.S. BLM 2003, Willamette Industries 2003 and Wilson 2002).

Exclude potential nesting structure within the project area and apply protection measures to ensure that the proposed action would not adversely affect murrelets.

Design the unit prescription, for units with potential structure, in accordance with LSR management standards.

Exclude from projects the removal or damage of potential nesting structure.

Design habitat modifications that occur within a distance equal to one site-potential tree height of potential structure to protect and improve future habitat conditions. Examples include protecting the roots of trees with potential structure, and removing suppressed trees, trees that might damage potential structure during wind storms, and trees that compete with key adjacent trees that are, or will be, providing cover to potential nest platforms. Apply management actions that aid limb development and the development of adjacent cover.

Do not create any opening (*i.e.*, a gap ≥ 0.25 acre [0.10 ha] in size) within a distance equal to one site-potential tree height of potential structure.

Plan Maintenance for fiscal year 2005

The Roseburg District and other Districts in western Oregon began a revision to the existing resource management plan and record of decision (ROD/RMP). This multi-year effort will develop potentially significant changes to the ROD/RMP guidelines. Details regarding the ROD/RMP revision can be seen at <http://www.or.blm.gov/lucurrwopr.htm>

Refinement and clarification of the Roseburg District's ROD/RMP, Objectives, Habitat Criteria, and Management Practices Design for the Land Use Allocations, Connectivity/Diversity Blocks:

The term 'area control rotation' is used twice in the ROD/RMP on pages 34 and 153. In both instances it is used to describe the management within the Connectivity/Diversity Block land use allocation. Area control rotation is not defined in the ROD/RMP glossary. However area regulation is defined as, "A method of scheduling timber harvest based on dividing the total acres by an assumed rotation." (ROD/RMP, page 101). The definition for 'area control rotation' would essentially be the same.

Minor changes, refinement and clarification of pages 151 – 153 as follows:

A.1. The first sentence should read: "Connectivity and Diversity: Manage to provide ecotypic richness and diversity and to provide for habitat connectivity for old-growth dependent and associated species within the Connectivity/Diversity Block portion of the Matrix land-use allocation."

C.2. As described in this section, "Manage so that best ecologically functioning stands will be seldom entered in the short term." Best ecologically functioning stands is not a well-defined term and does not help with implementation of Connectivity/Diversity Block management. Under area control rotation for the Connectivity/Diversity Block land use allocation, approximately 1,790 acres would be harvested per decade. For the first decade of implementation of the ROD/RMP, only about 490 acres of the Connectivity/Diversity Block land use allocation have been authorized for harvest. Since this meets the 'seldom entered in the short term' portion of this management direction, there is no need to further interpret the 'best ecologically functioning stands.' Thus, this sentence is removed.

C.3. Remove the Species Composition paragraph. This paragraph describes a percent species mix that does not always represent what would be the expected in natural stands on the Roseburg District. The previous paragraph describes, "Large conifers reserved will proportionally represent the total range of tree size classes greater than 20 inches in diameter and will represent all conifer species present." The conifer species present will be represented with conifers retained in harvest of Connectivity/Diversity Block lands.

C.5. As described in this section, Connectivity/Diversity Block area would be managed using a 150 year area control rotation. Regeneration harvest will be at the rate of 1/15 of the available acres in the entire Connectivity/Diversity block land use allocation per decade. This direction does not set a minimum harvest age for regeneration harvest. Harvest would be planned to occur on an area 1/15th of the Connectivity/Diversity Block land use allocation every decade.

Additionally, it states that “because of the limited size of operable areas within any given block, multiple decades of harvest could be removed at any one time from a single block in order to make viable harvest units.” Applying this direction to individual Connectivity/Diversity Blocks on the Roseburg District, regeneration harvest need not be uniformly applied across the entire land use allocation; rather, regeneration harvest may take place within an individual block as long as the 25-30 percent late-successional forests are maintained, as described on pages 34, 38, and 65 of the ROD/RMP. Late-successional forests are defined as being at least 80 years old. A description of whether regeneration harvests would occur in the oldest or youngest late-successional forests within the block is not required.

This paragraph further states that “the future desired condition across the entire Connectivity/Diversity block will have up to 15-16 different ten year age classes represented.” The intent of this direction is that as regeneration harvesting takes place, up to 15 to 16 different age classes will develop over a period of 150 years.

Plan Maintenance for fiscal year 2006

The Roseburg District and other Districts in western Oregon are engaged in revising the existing ROD/RMPs. This multi-year effort will develop potentially significant changes to the ROD/RMP guidelines. Details regarding the ROD/RMP revision can be seen at <http://www.blm.gov/or/plans/wopr/index.php>.

Issues arose during fiscal year 2006 on the following subject areas that warrant additional clarification and/or correction through plan maintenance:

Other Raptors Habitat

The Roseburg District ROD/RMP (page 39) states that “[k]nown and future raptor nest sites not protected by other management recommendations will be protected by providing suitable habitat buffers and seasonal disturbance restrictions”.

On occasion, this guidance has been incorrectly construed to mean that currently known nest sites or nest sites that have yet to be discovered belonging to any and all raptor species receive a suitable habitat buffer and a seasonal disturbance restriction. This is an incorrect interpretation. The ROD/RMP guidance (page 39) for “Other Raptors Habitat” makes an important distinction that only those raptor nest sites “...not protected by other management recommendations...” will receive suitable habitat buffers and seasonal disturbance restrictions.

For example, the Roseburg District ROD/RMP provides separate guidance for: great grey owl nest sites (page 44), Northern spotted owl nest sites (page 48), bald eagle nest sites (page 49), peregrine falcon nest sites (page 49), and Northern goshawk nest sites (page 49). Therefore, since these five species already have other, separate management recommendations as put forth in the ROD/RMP, the guidance from page 39 for “Other Raptor Habitat” does not apply to these species.

Timber Sale Units of Measure (Cubic Foot Measure vs. Scribner Rules)

The Roseburg District ROD/RMP (page 61) directs that “[t]imber sales under the plan will be sold according to cubic foot measure.”

The policy to measure and sell all timber sales following the National Cubic Rules was rescinded in Instructional Memorandum (IM) No. 2004-154, dated April 6, 2004 from the Washington Office. This IM (page 1) specified that “Each State Director has the authority to determine the form of timber measurement to be used for timber sales...”

Subsequently, the Oregon/Washington State Office issued guidance in IM No. OR-2004-073, dated April 30, 2004 (page 1), to Oregon/Washington BLM Districts that “[f]or the purposes of lump sum and scale disposal of timber, such as negotiated and advertised timber sales... the timber will usually be measured based upon board feet [i.e. Scribner rules].”

The method of timber volume measurement (National Cubic Rules versus board feet) is solely an administrative process and does not contribute to environmental effects. Furthermore, timber sale prospectuses issued in the Roseburg District typically include volumes in both cubic measurement and in board feet.

Therefore, the aforementioned language on page 61 of the Roseburg District ROD/RMP is replaced with the following: “Timber sales sold under the plan will usually be measured based upon board feet (i.e. Scribner Rules).”

Connectivity/Diversity Block Landscape Design Elements

The Roseburg District ROD/RMP provides guidance (page 152) to “[s]ituate harvest units to meet general landscape objectives on three levels of scale: physiographic province, landscape block or watershed and the stand”.

To clarify, the ROD/RMP itself considered the larger physiographic province scale in its strategy to manage ecosystems when land use allocations were designated and distributed across the landscape. Management direction provided in the ROD/RMP for Connectivity/Diversity Blocks (pages 151-153) represent decisions made during the analytical process that culminated in the ROD/RMP and incorporate landscape planning at the physiographic province scale. Landscape block or watershed scale considerations are reflected in completed Watershed Analysis documents and ten year sale plans; consideration at the stand scale is typically done within individual project EAs.

Miscellaneous Corrections

Page 8 of the ROD/RMP contains Table R-1, which cites commercial thinning/density management harvest to occur on 84 and 66 acres, respectively. The total of these acres is 150, which is incorrect. The ROD/RMP called for an annual average of 80 acres to be commercially thinned, with another 170 acres harvested to achieve density management. The correct total acreage is 250, which is reflected in Annual Program Summaries beginning in 2002.

2007 Amendment to the Northwest Forest Plan including the Roseburg District ROD/RMP

The NWFP was amended once in fiscal year 2007. The Survey and Manage standards and guidelines were removed in July 2007 through the signing of the Record of Decision (ROD) for the “*Final Supplement to the 2004 Supplemental Environmental Impact Statement To Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines.*” This Decision discontinues the Survey and Manage program and transfers selected Survey and Manage taxa to Agency Special Status Species Programs (SSSP). This supplemental EIS was written in response to a U.S. District Court ruling that deemed the 2004 Supplemental EIS pertaining to survey and manage inadequate.

Copies of the ROD and Final SEIS may be obtained by writing the Bureau of Land Management at PO Box 2965, Portland, Oregon 97208, or they can be accessed at <http://www.reo.gov/>

Plan Maintenance for fiscal year 2008

There was no Plan Maintenance conducted on the Roseburg District ROD/RMP in fiscal year 2008.

Plan Maintenance for fiscal year 2009

As part of the 2008 plan revision, the BLM brought Callahan Meadows, China Ditch, and Stouts Creek forward as potential Areas of Critical Environmental Concern (ACECs). While the 2008 ROD/RMPs were withdrawn, BLM Manual 1613 – Areas of Critical Environmental Concern states that potential ACECs should be provided temporary management until they can be further evaluated during the land use planning process. Management direction contained in Appendix N of the 2008 Final Environmental Impact Statement (2008 FEIS) may be used for this purpose.

Plan Maintenance for fiscal year 2010

Bald Eagle

Comply with the National Bald Eagle Management Guidelines (as a minimum).

Manage 4,658 acres along the major river corridors to develop or maintain forest structure needed to support nesting and foraging activities. These acres are withdrawn from the timber base.

Manage existing and future occupied bald eagle nest territories under the following management guidelines:

1. Maintain or attain the following stand characteristics on all lands managed for bald eagles:
 - a. Large conifer trees that are greater than 50 inches dbh and occur at a density of five to seven trees per acre.
 - b. Multi-storied canopy with at least 60 percent crown closure.
 - c. Remainder of the stand with conifer trees with an average dbh of 24 inches and an average density of 50 to 70 trees per acre.
2. Avoid disturbance, including logging, mining, and mineral leasing (except existing recreational use), within 0.25-mile of active nest sites (0.5-mile, when in line of sight) between the dates of January 1 and August 31.

3. Provide an appropriate level of fire protection on lands managed for bald eagles and restrict the use of insecticides within 1/2-mile of bald eagle sites.

Retain ownership of all BLM designated bald eagle habitat and pursue conservation easements or acquisition of other lands occurring within known active or future nesting territories. Priority is placed on acquiring 261 acres within Cougar Creek and Woodruff Mountain nesting territories.

Implementation of the Umpqua Corridor Habitat Management Plan will continue. Habitat plans will be developed for all active nesting territories.

Vehicle use on 1.5 miles of road at the head of Huntley Creek will be restricted from January 1 to August 31.

Peregrine Falcon

Known and potential (sites rated 7 or above) nesting cliffs will be managed to maintain site integrity.

Peregrine nesting sites on, and adjacent to, BLM-administered lands, sites occupied in the future, will have seasonal disturbance restrictions of 0.25-mile or greater around them; until site-specific management zones are identified. Actual area restricted will depend on the activity, topography, and the likely disturbance to the nest cliff. Seasonal restrictions on habitat disturbing activities and other disturbance events will extend from January 1 until August 15 (inclusive). Pesticides that have a negative effect on prey species or their habitat will not be applied within two miles of active sites. Habitat management plans will be written for all active peregrine falcon nest sites on BLM-administered lands. High potential sites will periodically be surveyed for occupancy and all future occupied sites will be monitored annual to determine occupancy, nesting, and production. Acquisition will be pursued for occupied nest sites occurring on adjacent private lands.

Plan Maintenance for fiscal year 2011

2007 Amendment to the Northwest Forest Plan including the Roseburg District ROD/RMP To Remove the Survey and Manage Mitigation Measure Standards and Guidelines

In litigation over the 2007 ROD, removing the Survey and Manage Mitigation Measure Standards and Guidelines (*Conservation Northwest et al. v. Sherman et al.*, Case No. 08-1067-JCC (W.D. Wash.)) the Court found for the plaintiffs and set aside the 2007 RODs and reinstated the 2001 ROD for amendments to Survey and Manage Mitigation Measure Standards and Guidelines on December 17, 2009.

The plaintiffs and Federal Agencies entered into settlement negotiations in April 2010, and the Court filed approval of the resulting Settlement Agreement on July 6, 2011. The 2011 Settlement Agreement makes four modifications to the 2001 ROD: (A) acknowledges existing exemption categories (2006 Pechman Exemptions); (B) updates the 2001 Survey and Manage species list; (C) establishes a transition period for application of the species list; and (D) establishes new exemption categories (2011 Exemptions). Table 23 shows a breakdown of the placement of these species, and a brief description of management actions required for each. However, in 2011 the Settlement Agreement in *Conservation Northwest et al. v. Sherman et al.* (Case No. 08-CV-1067-JCC [W.D. Wash.]) updated the 2001 Survey and Manage species list. The 2011 updates to the Survey and Manage species list and the categorization of species are reflected in Table 22 and not the species categorization as it was in 2001.

Table 23. Redefined Categories Based on Species Characteristics*

Relative Rarity	Pre-disturbance Surveys Practical	Pre-disturbance Surveys not Practical	Status Undetermined Pre-disturbance Surveys Not Practical
Rare	Category A – 57 species <ul style="list-style-type: none"> • Manage all known sites • Pre-disturbance surveys • Strategic surveys 	Category B – 185 species <ul style="list-style-type: none"> • Manage all known sites • N/A • Strategic surveys 	Category E – 31 species <ul style="list-style-type: none"> • Manage all known sites • N/A • Strategic surveys
Uncommon	Category C – 9 species <ul style="list-style-type: none"> • Manage high priority sites • Pre-disturbance surveys • Strategic surveys 	Category D – 18 species <ul style="list-style-type: none"> • Manage high priority sites • N/A • Strategic surveys 	Category F – 13 species <ul style="list-style-type: none"> • N/A • N/A • Strategic surveys

* Table reflects the Survey and Manage species list categorizations following the update in 2011 from the Settlement Agreement in *Conservation Northwest et al. v. Sherman et al.* (Case No. 08-CV-1067-JCC [W.D. Wash.]).

Incorporating Road and Sediment Delivery Best Management Practices into Resource Management Plans

Instruction Memorandum No. OR-2011-18 directed the districts to assist in the update of Best Management Practices (BMPs) that would disconnect road surfaces from drainage ditches. The BLM designed the BMPs to minimize or reduce the conveyance and delivery of sediment to the waters of the United States. All districts participated in the development of this updated set of BMPs that serve to disconnect the conveyance method to the extent practicable. Selection of BMPs is made by decision-makers using input from soil, water, fisheries, geology, and other professionals during project-level analyses. It is not intended that all of the BMPs listed will be selected for any specific management action. Each activity is unique, based on site-specific conditions and the selection of an individual BMP or a combination of BMPs and measures to become the BMP design.

Instruction Memorandum No. OR-2011-074 directed the districts incorporate the updated BMPs as plan maintenance. These BMPs provide direction regarding road maintenance practices and road-related actions with the intention to minimize or prevent sediment delivery to waters of the United States in compliance with the Clean Water Act of 1972 and its revisions.

Road Design, Construction, Use and Decommissioning Best Management Practices

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 001	Locate temporary and permanent roads and landings on stable locations, e.g., ridge tops, stable benches or flats, and gentle-to-moderate side slopes. Minimize construction on steep slopes, slide areas and high landslide hazard locations.	ODF (OAR) 629-625-0200 (3)	ODF (OAR) 629-625-0200, Road Location
R 002	Locate temporary and permanent road construction or improvement to minimize the number of stream crossings.	ODF (OAR) 629-625-0200 (3-4)	ODF (OAR) 629-625-0200, Road Location
R 003	Avoid locating roads and landings in wetlands, riparian management areas, floodplains and waters of the state. Avoid locating landings in areas that can contribute runoff to dry draws and swales.	ODF (OAR) 629-625-0200 (2)	ODF (OAR) 629-625-0200, Road Location
R 004	Locate roads and landings to minimize total transportation system mileage. Renovate or improve existing roads or landings when it would cause less adverse environmental impact. Where roads traverse land in another ownership, investigate options for using those roads before constructing new roads.	EPA (2005)Page 3-12 Bullet 1; ODF (OAR) 629-625-0200 (5); EPA (2005)Page 3-10 Bullet 1	ODF (OAR) 629-625-0200, Road Location
R 005	Design and construct sub-surface drainage in landslide prone areas and saturated soils (e.g., trench drains using geo-textile fabrics and drain pipe).	ODEQ 2005, RC-1, RC-6 (pages 4-5, 4-6)	ODF (OAR) 629-625-0300, Road Design
R 006	Design road cut and fill slopes with stable angles, to minimize erosion and prevent slope failure.	EPA 2005 mod 3-13	ODF (OAR) 629-625-0310, Road Prism
R 007	Design roads to the minimum width needed for the intended use as referenced in BLM Manual 9113.	ODF 629-625-0310 (3)	ODF (OAR) 629-625-0310, Road Prism
R 008	End-haul material excavated during construction, renovation, and/or maintenance where side slopes generally exceed 60 percent, and regardless of slope where side-cast material may enter wetlands, floodplains and waters of the state.	FEIS 2008 with modification using EPA 2005 page 3-12 5th bullet	ODF (OAR) 629-625-0310, Road Prism
R 009	Construct road fills to prevent fill failure using inorganic material, compaction, buttressing, sub-surface drainage, rock facing or other effective means.	OAR 629-625-0310-5	ODF (OAR) 629-625-0310, Road Prism

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 010	Avoid use of road fills for water impoundment dams unless specifically designed for that purpose. Impoundments over 9.2 acre feet or 10 feet in depth will require a dam safety assessment by a registered engineer. Upgrade existing road fill impoundments to pass 100-year flood events.	OAR 629-625-0310-5	ODF (OAR) 629-625-0310, Road Prism
R 011	Design roads crossing low-lying areas so that water does not pond on the upslope side of the road. Provide cross drains at short intervals to ensure free drainage.	FEIS 2008	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 012	Minimize fill volumes at permanent and temporary stream crossings by restricting width and height of fill to amounts needed for safe travel and adequate cover for culverts. For deep fills (generally greater than 15 feet deep) incorporate additional design criteria (e.g., rock blankets, buttressing, bioengineering techniques) to reduce the susceptibility of fill failures.	ODF OAR 629-625 -0320 (1b)	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 013	Locate stream crossing culverts on well defined, unobstructed, and straight reaches of stream. Locate these crossings as close to perpendicular to the streamflow as stream allows. When structure cannot be aligned perpendicular, provide inlet and outlet structures that protect fill and minimize bank erosion. Choose crossings that have well defined stream channels with erosion resistant bed and banks.	EPA 2005, 3-14 G&A 2006, p5-30	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 014	On new construction, install culverts at the natural stream grade.	FEIS 2008	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 015	Use stream crossing protection techniques to allow flood water and debris to flow over the top of the road prism without the loss of the fill or diversion of streamflow. This protection could include hardening crossings, armoring fills, dipping grades, oversizing culverts, hardening inlets and outlets, and lowering the fill height.	FEIS 2008	ODF (OAR) 629-625-0320, Stream Crossing Structures

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 016	Place instream grade control structures above or below the crossing structure, if necessary, to prevent stream headcutting, culvert undermining and downstream sedimentation. Employ bioengineering measures (e.g., large wood for gradient control) to protect the stability of the streambed and banks.	ODEQ 2005 , RC - 2, Gesford & Anderson 2006, pp 5 -31, USDA RMRS GTR 102 - #20	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 017	Prevent culvert plugging and failure in areas of active debris movement with measures such as beveled culvert inlets, flared inlets, wingwalls, over-sized culverts, trash racks or slotted risers.	FEIS 2008	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 018	When installing temporary culverts, use washed rock as a backfill material. Use geotextile fabric as necessary where washed rock will spread with traffic and cannot be practicably retrieved.	ODEQ 2005 NS-3	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 019	Use permanent low water fords in debris-flow susceptible streams (e.g., concrete, well anchored concrete mats, etc.).	EPA 2005 p3-50	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 020	Design roads crossing low-lying areas so that water does not pond on the upslope side of the road. Provide cross drains at short intervals to ensure free drainage.	EPA (2005) Page 3-14 Bullet 1	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 021	Use no-fill structures (e.g., portable mats, temporary bridges, or improved hardened crossings) for temporary stream crossings. When not practicable, design temporary stream crossings with the least amount of fill and construct with coarse material to facilitate removal upon completion.	ODF 629-625-0320 (2)	ODF (OAR) 629-625-0320, Stream Crossing Structures
R 022	Install underdrain structures when roads cross or expose springs, seeps, or wet areas rather than allowing intercepted water to flow downgradient in ditchlines.	ODF (OAR) 629-625-0330 (5)	ODF (OAR) 629-625-0330, Drainage
R 023	Effectively drain the road surface by using crowning, insloping or outsloping , grade reversals (rolling dips) and waterbars or a combination of these methods. Avoid concentrated discharge onto fill slopes unless the fill slopes are stable and erosion proofed.	EPA 2005, 3-41	ODF (OAR) 629-625-0330, Drainage
R 024	Outslope temporary and permanent low volume roads to provide surface drainage on road gradients up to 6% unless there is a traffic hazard from the road shape.	EPA 2005 page 3-42 & USDA RMRS GTR 102-#13	ODF (OAR) 629-625-0330, Drainage

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 025	Consider using broadbased drainage dips and/or lead-off ditches in lieu of cross drains for low volume roads. Locate these surface water drainage measures where they won't drain into wetlands, floodplains and waters of the state.	EPA 2005 page 3-41 - 45 & USDA RMRS GTR 102-#13	ODF (OAR) 629-625-0330, Drainage
R 026	Avoid use of outside road berms unless designed to protect road fills. If road berms are used, breach to accommodate drainage where fill slopes are stable.	Gesford & Anderson 2006, pp 3-7	ODF (OAR) 629-625-0330, Drainage
R 027	Construct variable road grades and alignments (e.g., roll the grade, grade breaks) which limit water concentration, velocity, flow distance and associated stream power.	Gesford & Anderson 2006, pp 5-20 OAR 629-625-0310 (1)	ODF (OAR) 629-625-0330, Drainage
R 028	Divert road and landing runoff water away from headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes.	ODF 629-625-0330 (2)	ODF (OAR) 629-625-0330, Drainage
R 029	Design landings to disperse surface water to vegetated stable areas.	FEIS 2008	ODF (OAR) 629-625-0330, Drainage
R 030	Design stream crossings to prevent diversion of water from streams into downgrade road ditches or down road surfaces..	ODF OAR 629-625 -0330 (3)	ODF (OAR) 629-625-0330, Drainage
R 031	Disconnect the road runoff to the stream channel by outslipping the road approach. If outslipping is not possible, use runoff control, erosion control and sediment containment measures. These may include using additional cross drain culverts, ditch lining, and catchment basins. Minimize ditch flow conveyance to stream through cross drain placement above stream crossing.	Gesford & Anderson 2006 pp 5-22, OAR 629-625-0330 (4)	ODF (OAR) 629-625-0330, Drainage
R 032	Locate cross drains to prevent or minimize runoff and sediment conveyance to wetlands, riparian management areas, floodplains and waters of the state. Implement sediment reduction techniques such as settling basins, brush filters, sediment fences and check dams to prevent or minimize sediment conveyance.	ODF OAR 629-625 -0330 (4)	ODF (OAR) 629-625-0330, Drainage

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 033	Space cross drain culverts at intervals sufficient to prevent water volume concentration and accelerated ditch erosion. At a minimum, space cross drains at intervals referred to in the BLM Road Design Handbook 9113-1, Illustration 11 - "Spacing for Drainage Laterals". Increase cross drain frequency through erodible soils, steep grades, and unstable areas.	FEIS 2008	ODF (OAR) 629-625-0330, Drainage
R 034	Choose cross drain culvert diameter and type according to predicted ditch flow, debris and bedload passage expected from the ditch. Minimum diameter is 18 inches.	USDA 1997-9777 1812-SDTDC, p 3	ODF (OAR) 629-625-0330, Drainage
R 035	Locate surface water drainage measures (e.g., cross drain culverts, rolling dips, water bars) where water flow will be released on convex slopes or other stable and non-erosive areas that will absorb road drainage and prevent sediment flows from reaching wetlands, floodplains and waters of the state. Where possible locate surface water drainage structures above road segments with steeper downhill grade.	USDA 1997-9777 1812-SDTDC, p 3	ODF (OAR) 629-625-0330, Drainage
R 036	Armor surface drainage structures (e.g., broad based dips, leadoff ditches) to maintain functionality in areas of erosive and low strength soils.	FEIS 2008	ODF (OAR) 629-625-0330, Drainage
R 037	Discharge cross drain culverts at ground level on non-erodible material. Install downspout structures and/or energy dissipaters at cross drain outlets or drivable dips where water is discharged onto loose material, erodible soils, fills, or steep slopes.	ODEQ 2005 RC-2, Gesford and Anderson 2006, pp 5-31	ODF (OAR) 629-625-0330, Drainage
R 038	Cut protruding "shotgun" culverts at the fill surface or existing ground. Install downspout and/or energy dissipaters to prevent erosion.	FEIS 2008	ODF (OAR) 629-625-0330, Drainage
R 039	Skew cross drain culverts 45 to 60 degrees from the ditchline as referenced in BLM Road Design Handbook 9113-1 and provide pipe gradient slightly greater than ditch gradient to reduce erosion at cross drain inlet.	BLM road design handbook H9113-1, revised 2009	ODF (OAR) 629-625-0330, Drainage

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 040	Use slotted risers, over-sized culverts or build catch basins where floatable debris or sediments may plug cross drain culverts.	EPA 2005 pp 3-43	ODF (OAR) 629-625-0330, Drainage
R 041	Locate waste disposal areas outside wetlands, riparian management areas, floodplains and unstable areas to minimize risk of sediment delivery to waters of the state. Apply surface erosion control prior to the wet season. Prevent overloading areas which may become unstable.	ODF (OAR) 629-625-0340 FEIS 2008	ODF (OAR) 629-625-0340, Waste Disposal Areas
R 042	Confine pioneer roads to the construction limits of the permanent roadway to reduce the amount of area disturbed and avoid deposition in wetlands, riparian management areas, floodplains and waters of the state. Install temporary drainage, erosion, and sediment control structures. Storm proof or close pioneer roads prior to the onset of the wet season.	EPA (2005) Page 3-41 Bullet 2	ODF (OAR) 629-625-0410, Disposal of Waste Materials
R 043	Use controlled blasting techniques to minimize loss of material on steep slopes or into wetlands, riparian management areas, floodplains and waters of the state.	FEIS 2008	ODF (OAR) 629-625-0410, Disposal of Waste Materials
R 044	Provide for unobstructed flow at culvert inlets and within ditch lines during and upon completion of road construction prior to the wet season.	FEIS 2008	ODF (OAR) 629-625-0420, Drainage
R 045	Use temporary sediment control measures (e.g., check dams, silt fencing, bark bags, filter strips and mulch) to slow runoff and contain sediment from road construction areas. Remove any accumulated sediment and the control measures when work or haul is complete. When long term structural sediment control measures are incorporated into the final erosion control plan, remove any accumulated sediment to retain capacity of the control measure.	FEIS 2008 with modification using ODEQ 2005 RC-11	ODF (OAR) 629-625-0430, Stream Protection
R 046	Conduct all nonemergency in-water work during the ODFW instream work window.	Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources – June, 2008 ODF OAR 629-625-0430 (2)	ODF (OAR) 629-625-0430, Stream Protection

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 047	Utilize stream diversion and isolation techniques when installing stream crossings. Evaluate the physical characteristics of the site, volume of water flowing through the project area and the risk of erosion and sedimentation when selecting the proper techniques.	ODEQ 2006, RC-9 and 10	ODF (OAR) 629-625-0430, Stream Protection
R 048	Limit activities and access points of mechanized equipment to streambank areas or temporary platforms when installing or removing structures. Keep equipment activity in the stream channel to an absolute minimum.	OAR 629-625-0430 (2)	ODF (OAR) 629-625-0430, Stream Protection
R 049	Install stream crossing structures before heavy equipment moves beyond the crossing area.	FEIS 2008	ODF (OAR) 629-625-0430, Stream Protection
R 050	Remove temporary crossing structures promptly after use. Follow practices under the Closure/Decommissioning section for removing stream crossing drainage structures and reestablishing the natural drainage.	ODF (OAR) 629-625-0430 (5)	ODF (OAR) 629-625-0430, Stream Protection
R 051	Harden low water ford approaches with durable materials. Provide cross drainage on approaches.	EPA 2005 p3-50	ODF (OAR) 629-625-0430, Stream Protection
R 052	Restrict access to unimproved low water stream crossings.	ODR (OAR) 629-625-0430 (5)	ODF (OAR) 629-625-0430, Stream Protection
R 053	Locate equipment washing sites in areas with no potential for runoff into wetlands, riparian management areas, floodplains and waters of the state. Do not use solvents or detergents to clean equipment on site.	ODEQ 2005 , NS-5	ODF (OAR) 629-625-0430, Stream Protection
R 054	Limit disturbance to vegetation and modification of streambanks when locating road approaches to in-stream water source developments. Surface these approaches with durable material. Employ erosion and runoff control measures.	FEIS 2008	ODF (OAR) 629-625-0430, Stream Protection
R 055	Direct pass-through flow and/or overflow from in-channel and any connected off-channel water developments back into the stream.	FEIS 2008	ODF (OAR) 629-625-0430, Stream Protection
R 056	Overflow from water harvesting ponds should be directed to a safe non-eroding dissipation area, and not into a stream channel.	Unknown	Does not fit any ODF category

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 057	Limit the construction of temporary in-channel water drafting sites. Develop permanent water sources outside of stream channels and wetlands.	FEIS 2008 & ODEQ 2005, NS-1	ODF (OAR) 629-625-0430, Stream Protection
R 058	Do not place pump intakes on the substrate or edges of the stream channel. When placing intakes instream, place on hard surfaces (e.g., shovel, rocks) to minimize turbidity. Use a temporary liner to create intake site. After completion of use, remove liner and restore channel to natural condition.	FEIS 2008 & ODEQ 2005, NS-1	ODF (OAR) 629-625-0430, Stream Protection
R 059	Do not place pump intakes on the substrate or edges of the stream channel. When placing intakes instream, place on hard surfaces (e.g., shovel, rocks) to minimize turbidity. Use a temporary liner to create intake site. After completion of use, remove liner and restore channel to natural condition.	(404(f) exemption criteria xi)	ODF (OAR) 629-625-0430, Stream Protection
R 060	During roadside brushing remove vegetation by cutting rather than uprooting.	ODF (OAR) 629-625-0430 (4)	ODF (OAR) 629-625-0430, Stream Protection
R 061	Limit road and landing construction, reconstruction, or renovation activities to the dry season. Keep erosion control measures concurrent with ground disturbance to allow immediate stormproofing.	FEIS 2008	ODF (OAR) 629-625-0440, Stabilization
R 062	Apply native seed and certified weed free mulch to cut and fill slopes, ditchlines, and waste disposal sites with the potential for sediment delivery to wetlands, riparian management areas, floodplains and waters of the state. Apply upon completion of construction and as early as possible to increase germination and growth. Reseed if necessary to accomplish erosion control. Select seed species that are fast growing, have adequate germination and provide ample ground cover and soil-binding properties. Apply mulch that will stay in place and at site specific rates to prevent erosion.	FEIS 2008	ODF (OAR) 629-625-0440, Stabilization

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 063	Place sediment-trapping materials or structures such as straw bales, jute netting, or sediment basins at the base of newly constructed fill or side slopes where sediment could be transported to waters of the state. Keep materials away from culvert outlets.	USDS RMRS GTR 102-#18	ODF (OAR) 629-625-0440, Stabilization
R 064	Use biotechnical stabilization and soil bioengineering techniques to control bank erosion (e.g., commercially produced matting and blankets, live plants or cuttings, dead plant material, rock or other inert structure).	USDS RMRS GTR 102-#18 & 20	ODF (OAR) 629-625-0440, Stabilization
R 065	Suspend ground-disturbing activity if projected forecasted rain will saturate soils to the extent that there is potential for movement of sediment from the road to wetlands, floodplains and waters of the state. Cover or temporarily stabilize exposed soils during work suspension. Upon completion of ground disturbing activities, immediately stabilize fill material over stream crossing structures. Measures could include but not limited to erosion control blankets and mats, soil binders, soil tackifiers, slash placement.	ODEQ 2010 1200-c permit 7 a I & ii.	ODF (OAR) 629-625-0440, Stabilization
R 066	When conducting erosion control measures, apply fertilizer in a manner to prevent direct fertilizer entry to wetlands, riparian management areas, floodplains and waters of the state.	May find in BO for fish protection	ODF (OAR) 629-625-0440, Stabilization
R 067	Stabilize cutbanks, headwalls and other surfaces and prevent overburden, solid wastes, drainage water or petroleum products from entering wetlands, riparian management areas, floodplains and waters of the state during the development and use of rock pits or quarries.	ODF OAR 629-625-0500 1-5 next 5 new BMPs	ODF (OAR) 629-625-0500, Rock Pits and Quarries
R 068	Do not locate new or expand existing quarry sites or stockpile sites in wetlands, riparian management areas, and floodplains or waters of the state. Control runoff from quarries to prevent sediment delivery to waters of the state.	FEIS 2008 Minerals BMP OAR 340-041-0036	ODF (OAR) 629-625-0500, Rock Pits and Quarries

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 069	When a quarry or rock pit is inactive or vacated, stabilize cutbanks, headwalls, and other surfaces to prevent surface erosion and landslides. Remove all potential pollutants to prevent their entry into wetlands, riparian management areas, floodplains and waters of the state.	FEIS 2008 Minerals BMP mod & ODEQ 2005 NS - 6	ODF (OAR) 629-625-0500, Rock Pits and Quarries
R 070	Apply water or approved road surface stabilizers/dust control additives to reduce surfacing material loss and buildup of fine sediment that can enter into wetlands, floodplains and waters of the state. Prevent entry of road surface stabilizers/dust control additives into waters of the state during application.	ODEQ 2005, EP-13	ODF (OAR) 629-625-0600, Road Maintenance
R 071	Prior to the wet season, provide effective road surface drainage through practices such as machine cleaning of ditches, surface blading including berm removal, constructing sediment barriers, cleaning inlets and outlets.	ODF OAR 629-625 0600 (2-4) EPA 2005 pp361-362	ODF (OAR) 629-625-0600, Road Maintenance
R 072	Avoid undercutting of cut-slopes when cleaning ditchlines. Seed with native species and use weed free mulch on bare soils including cleaned ditchlines that drain directly to wetlands, floodplains and waters of the state.	EPA 2005 pp362	ODF (OAR) 629-625-0600, Road Maintenance
R 073	Remove and dispose of slide material when it is obstructing road surface and ditchline drainage. Place material on stable ground outside of wetlands, riparian management areas, floodplains and waters of the state.	ODF OAR 629-625-0600 (6)	ODF (OAR) 629-625-0600, Road Maintenance
R 074	Do not sidecast loose ditch or surface material where it can enter wetlands, riparian management areas, floodplains and waters of the state.	FEIS 2008 & ODF OAR 629-625-0600 (7)	ODF (OAR) 629-625-0600, Road Maintenance
R 075	Inspect and maintain culvert inlets and outlets, drainage structures and ditches before and during the wet season to diminish the likelihood of plugged culverts and the possibility of washouts.	FEIS 2008 & ODF OAR 629-625 -0600 (3)	ODF (OAR) 629-625-0600, Road Maintenance
R 076	Repair damaged culvert inlets and downspouts to maintain drainage design capacity.	FEIS 2008 & ODF OAR 629-625 -0600 (3)	ODF (OAR) 629-625-0600, Road Maintenance

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 077	Blade and shape roads to conserve existing aggregate surface material, retain or restore the original cross section, remove berms and other irregularities that impede effective runoff or cause erosion, and ensure that surface runoff is directed into vegetated, stable areas.	FEIS 2008 & ODF OAR 629-625 -0600 (4)	ODF (OAR) 629-625-0600, Road Maintenance
R 078	Retain ground cover in ditchlines, except where sediment deposition or obstructions require maintenance.	FEIS 2008	ODF (OAR) 629-625-0600, Road Maintenance
R 079	Retain low-growing vegetation on cut-and-fill slopes.	FEIS 2008 & EPA 2005 ; EP-6	ODF (OAR) 629-625-0600, Road Maintenance
R080	Stormproof open resource roads receiving infrequent maintenance to reduce road erosion and reduce the risk of washouts by concentrated water flows. Stormproof temporary roads if retained over-winter.	ODF OAR 629-625-0600 (2)	ODF (OAR) 629-625-0600, Road Maintenance
R 081	Suspend stormproofing/decommissioning operations and cover or otherwise temporarily stabilize all exposed soil if conditions develop that cause a potential for sediment laden runoff to enter a wetland, floodplain or waters of the state. Resume operations when conditions allow turbidity standards to be met.	FEIS 2008	ODF (OAR) 629-625-0600, Road Maintenance
R 082	Inspect closed roads to ensure that vegetational stabilization measures are operating as planned, drainage structures are operational, and noxious weeds are not providing erosion control. Conduct vegetation treatments and drainage structure maintenance as needed.	FEIS 2008 & ODF OAR 629-625 -0650 (2)	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 083	Fully decommission or obliterate temporary roads upon completion of use.	FEIS 2008	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 084	Consider decommissioning or fully decommissioning low volume permanent roads not needed for future resource management located in, or draining into wetlands, riparian management areas, floodplains or waters of the state.	EPA 2005 3-64	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 085	Prevent use of vehicular traffic using methods such as gates, guard rails, earth/log barricades, to reduce or eliminate erosion and sedimentation due to traffic on roads.	ODF OAR 629-625 -0650 (2)	ODF (OAR) 629-625-0650, Vacating Forest Roads

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 086	Convert existing drainage structures such as ditches and cross drain culverts to a long-term maintenance free drainage configuration such as outslopped road surface and waterbars.	FEIS 2008 & ODF OAR 629-625 -0650 (3)	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 087	Remove stream crossing culverts and entire in-channel fill material during ODFW instream work period.	FEIS 2008	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 088	Place excavated material from removed stream crossings on stable ground outside of wetlands, riparian management areas, floodplains and waters of the state. In some cases material could be used for recontouring old road cuts or be spread across roadbed and treated to prevent erosion.	FEIS 2008	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 089	Reestablish stream crossings to the natural stream gradient. Excavate sideslopes back to the natural bank profile. Reestablish natural channel width and floodplain.	FEIS 2008	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 090	On each side of a stream crossing, construct waterbars or cross ditches that will remain maintenance free.	FEIS 2008 & ODF OAR 629-625 -0650 (3)	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 091	Following culvert removal and prior to the wet season, apply erosion control and sediment trapping measures (e.g., seeding, mulching, straw bales, jute netting, native vegetative cuttings) where sediment can be delivered into wetlands, riparian management areas, floodplains and waters of the state.	FEIS 2008 & ODF OAR 629-625 -0650 (3)	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 092	Implement decompaction measures, including ripping or subsoiling to an effective depth. Treat compacted areas including the roadbed, landings, construction areas, and spoils sites.	FEIS 2008	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 093	After decompacting the road surface, pull back unstable road fill and either end-haul or recontour to the natural slopes.	FEIS 2008	ODF (OAR) 629-625-0650, Vacating Forest Roads
R 094	On active haul roads, during the wet season, use durable rock surfacing and sufficient surface depth to resist rutting or development of sediment on road surfaces that drain directly to wetlands, floodplains and waters of the state.	ODF (OAR) 629-625-0700 (2)	ODF (OAR) 629-625-0700, Wet Weather Road Use

Road BMP No.	Text	Source	Oregon Dept. of Forestry/Oregon Administrative Rules Forest Roads - Division 625
R 095	Prior to winter hauling activities, implement structural road treatments such as: increasing the frequency of cross drains, installing sediment barriers or catch basins, applying gravel lifts or asphalt road surfacing at stream crossing approaches, and cleaning and armoring ditchlines.	ODF (OAR) 629-625-0700 (2)	ODF (OAR) 629-625-0700, Wet Weather Road Use
R 096	Suspend commercial use where the road surface is deeply rutted or covered by a layer of mud or when runoff from the road surface is causing a visible increase in stream turbidity in the receiving stream.	ODF OAR 629-625-0700 - 3 modified with add from FEIS 2008	ODF (OAR) 629-625-0700, Wet Weather Road Use
R 097	Remove snow on haul roads in a manner that will protect roads and adjacent resources. Retain a minimum layer (2-4 inches) of compacted snow on the road surface. Provide drainage through the snow bank at periodic intervals to allow for snow melt to drain off the road surface.	BLM Snow removal letter. Issued annually in the fall to ROW permittees.	ODF (OAR) 629-625-0700, Wet Weather Road Use
R 098	Do not allow wet season haul on natural surface roads or high sediment producing surfaced roads without practicable and effective mitigation.	ODF OAR 629-625-0700 (1)	ODF (OAR) 629-625-0700, Wet Weather Road Use
R 099	Maintain road surface by applying appropriate gradation of aggregate and suitable particle hardness to protect road surfaces from rutting and erosion under active haul where runoff drains to wetlands, riparian management areas, floodplains and waters of the state.	ODF OAR 629-625-0700 (2)	ODF (OAR) 629-625-0700, Wet Weather Road Use
R 100	To reduce sediment tracking from natural surface roads during active haul provide gravel approach before entrance onto surfaced roads.	ODEQ 2010-1200c-7 diiii	ODF (OAR) 629-625-0700, Wet Weather Road Use
R 101	Install temporary culverts and washed rock on top of low water ford to reduce vehicle contact with water during active haul. Remove culverts promptly after use.	BLM – WOTT - 2011	ODF (OAR) 629-625-0700, Wet Weather Road Use

Bureau of Land Management Road Best Management Practices Glossary

Note: These terms are defined in relation to their use in the Bureau of Land Management (BLM) Road Best Management Practices (BMP).

Bed Load: Coarse sediment particles with a relatively fast settling rate that move by sliding, rolling or bouncing along the streambed in response to higher stream flows.

Bioengineering: Techniques combining the biological elements of live plants with engineering design concepts for slope protection and erosion reduction.

Broad Based Dip: Shallow gradual dips in the constructed road grade with a higher-than-road surface embankment angled across the road in the direction of water flow. The dip portion is used to drain ditch flows to the other side of the road where drainage can dissipate at ground level or exit upon an erosion resistant surface, if needed, to prevent erosion.

Commercial Use: The primary purpose for development and use of the BLM road system is access for forest management activities and the transportation of forest products. Commercial use of BLM's road system typically includes log hauling and aggregate hauling and is authorized by either 1) perpetual reciprocal right-of-way agreements between the United States and private timberland owners, or 2) BLM timber sale contracts.

Cross Drain Culvert: Culverts strategically installed to pass ditch runoff or drain seeps and springs, safely under the road prism. (Often referred to as relief culverts).

Crown: The center of the road being higher than the outer edges, creating a nearly flat A-shape with a normal cross slope of 1/2" to 3/4" per foot.

Culvert: Enclosed channels of various materials and shapes designed to convey stream or ditch water under and away from the roadway.

Cutbank Gouging: A problematic practice during grading and ditch cleaning operations where the road maintenance equipment cuts into the toe of a stable bank and creates a vertical surface thereby destabilizing the bank .

Durable Rock Surfacing: Durability is an indicator of the relative quality or competence of an aggregate to resist abrasion, impact or grinding to produce clay-like fines when subjected to commercial hauling. Durable rock surfacing will support commercial timber or rock haul in the winter with a minimal level of fines produced due to wear.

Dry Season: An annually variable period of time, starting after spring rains cease and when hillslope subsurface flow declines; drying intermittent streams and roadside ditches. Generally June through October, but may start or end earlier depending on seasonal precipitation influences.

Effective Depth of Decompaction: The depth to which the soil is tilled or loosened to provide infiltration capacity that is near to the adjacent undisturbed forest floor. Measured depth is from road surface to bottom of evidence of platy soil or increased bulk density that impedes water transmission.

Energy Dissipater: Any device or installation of material used to reduce the energy of flowing water.

Geotextile: A geosynthetic fabric or textile manufactured from synthetic plastic polymers, not biodegradable, in woven or non-woven types, and used for various purposes ranging from reinforcement and separation to drainage filtration and sediment control.

Grade Break: A long, gradual break in grade on a road with a relatively gradual downhill slope that improves drainage. Grade breaks limit water flow by decreasing concentration and velocity from a reduced area of road section.

High Sediment Producing Roads: Roads whose physical characteristics and rights of way vegetation, in combination with precipitation in the watershed and traffic result in high erosion rates.

Insloping: Constructing and maintaining the entire surface of the road toward the cutslope side of the road.

Lead-off Ditch: A formed channel that diverts ditch water away from the road, usually angled in the direction of water flow and placed at locations to empty into vegetative filtering areas.

Low Volume Road: A road that is functionally classified as a resource road and has a design average daily traffic volume of 20 vehicles per day or less.

Mitigation: The act of reducing or eliminating an adverse environmental impact.

ODFW in stream work period: Oregon Department of Fish and Wildlife designated guidelines that identify periods of time for in-water work that would have the least impact on important fish, wildlife and habitat resources. Work periods are established to avoid the vulnerable life stages of fish including migration, spawning and rearing. Work periods are established for the named stream, all upstream tributaries, and associated lakes within a watershed. (Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources – June, 2008)

Outsloping: Constructing and maintaining the entire surface of the road toward the fillslope side of the road.

Pioneer Road: Temporary access ways, within the path of the permanent road, used to facilitate construction and equipment access. When building permanent roads, pioneer roads exist within the template of the finished road.

Renovation: Consists of work done to an existing road, restoring it to its original design standard.

Resource Road: Roads that provide a point of access to public lands and connect with local or collector roads.

Riparian Management Area: The areas along watercourses, lakes and wetlands which are primarily managed specifically for protection of aquatic and riparian dependent beneficial uses under Resource Management Plans.

Road Closures Categories:

a. Temporary/Seasonal/Limited Access – These are typically resource roads, closed with a gate or barrier. The road will be closed to public vehicular traffic but may be open for BLM/Permittee commercial activities. The road may or may not be closed to BLM administrative uses on a seasonal basis depending upon impacts to the resources. Drainage structures will be left in place.

b. Decommission (long-term) –The road segment will be closed to vehicles on a long-term basis, but may be used again in the future. Prior to closure the road will be left in an erosion-resistant condition by establishing

cross drains, eliminating diversion potential at stream channels, and stabilizing or removing fills on unstable areas. Exposed soils will be treated to reduce sediment delivery to streams. The road will be closed with an earthen barrier or its equivalent. This category can include roads that have been or will be closed due to a natural process (abandonment) and may be opened and maintained for future use.

c. Full Decommission (permanent) – Roads determined to have no future need may be subsoiled (or tilled), seeded, mulched, and planted to reestablish vegetation. Cross drains, fills in stream channels, and unstable areas will be removed, if necessary, to restore natural hydrologic flow. The road will be closed with an earthen barrier or its equivalent. The road will not require future maintenance. This category includes roads that have been closed due to a natural process (abandonment) and where hydrologic flow has been naturally restored.

d. Obliteration (full site restoration/permanent) – Roads receiving this level of treatment have no future need. All drainage structures will be removed. Fill material used in the original road construction will be excavated and placed on the subgrade in an attempt to reestablish the original ground line. Exposed soil will be vegetated with native trees or other native vegetation. Road closure by obliteration is rarely used.

Sediment: Fine particles of inorganic and /or organic matter carried by water.

Shotgun Culverts: Ditch relief or stream culverts where the outlet extends beyond the natural ground line.

Storm-proof: Roads having a self-maintaining condition, allowing unimpeded flows at channel crossings and surface conditions that reduce chronic sediment input to stream channels.

Temporary Road: A short-term use road authorized for the development of a project that has a finite lifespan, e.g., a timber sale spur road. Temporary roads are not part of the permanent designated transportation network and must be reclaimed when their intended purpose has been fulfilled.

Turbidity: The cloudiness exhibited by water carrying sediment. The degree to which suspended sediment interferes with light passage through water.

Underdrain: Culverts installed to convey water from springs, and seeps encountered during road construction, under the road.

Water drafting site: Site to provide a short duration, small pump operation that withdraws water from streams or impoundments to fill conventional tank trucks or trailers.

Water Harvesting Pond: Ponds constructed to capture and store rainwater or snowmelt.

Waters of the State: Includes lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private which are wholly or partially within or bordering the State or within its jurisdiction. ORS § 468B.005(10).

Wetland: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, as defined by the 1972 Federal Clean Water Act. These wetlands generally meet the jurisdictional wetland criteria.

Wet Season: An annually variable period of time, starting after precipitation amounts saturate soils. This occurs after the onset of fairly continuous fall rains which result in seasonal runoff in ephemeral and intermittent stream channels and from the road surface and ditches. Generally November through May, but could start or end earlier depending on seasonal precipitation influences.

Resource Management Plan Monitoring Report for Fiscal Year 2011

Fiscal Year 2011 Monitoring Report

Executive Summary

Introduction

This document represents the fourteenth monitoring report of the Roseburg District ROD/RMP which was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring of the ROD/RMP for fiscal year 2011. This report does not include the monitoring conducted by the Roseburg District identified in activity or project plans. Monitoring at multiple levels and scales along with coordination with other BLM and Forest Service units has been initiated through the Regional Interagency Executive Committee (RIEC).

The ROD/RMP monitoring effort for fiscal year 2011 addressed 25 implementation questions relating to the land use allocations and resource programs contained in the Monitoring Plan. There are 51 effectiveness and validation questions included in the Monitoring Plan. The effectiveness and validation questions were not required to be addressed because some time is required to elapse after management actions are implemented in order to evaluate results that would provide answers. There is effectiveness and validation monitoring applicable to the ROD/RMP which is being developed and conducted through the Regional Ecosystem Office.

Findings

Monitoring results indicate almost full compliance with management action/direction in the twenty land use allocations and resource programs identified for monitoring in the plan.

The Roseburg District was unable to offer the full ASQ level of timber required under the ROD/RMP in fiscal year 2011. Predictably, subsequent silvicultural treatments such as site preparation, planting, and fertilization were also less than projected. Other silvicultural treatments such as maintenance/protection, precommercial thinning, and pruning were more than anticipated.

The Little River Adaptive Management Area has not met certain requirements of the ROD/RMP. It does not have a functioning advisory committee, it does not have an approved plan, and it has not tested the innovative practices that would test the emphasis of Little River Adaptive Management Area.

Recommendations

The circumstances that have frustrated the District's ability to implement the underlying assumptions that form the basis of the Allowable Sale Quantity remain unresolved.

There is currently no strategy to resolve the discrepancies associated with the Little River Adaptive Management Area. A Resource Management Plan revision addressing these issues concluded in 2008. However, on July 16, 2009 the U.S. Department of the Interior, withdrew the 2008 Records of Decision and directed the BLM to implement actions in conformance with the resource management plans for western Oregon that were in place prior to December 30, 2008.

As a result of the withdrawal of the 2008 Records of Decision, the Roseburg District resumed operating under the 1995 Records of Decision and Resource Management Plans (1995 ROD/RMPs) as amended and maintained. The 2008 ROD/RMPs for the western Oregon BLM districts were reinstated on March 31, 2011 in Douglas Timber Operators et al. v. Salazar-DOI. As a result, the Roseburg District has resumed operating under the 2008 ROD/RMP. Given continuing uncertainty of the status of the 2008 ROD/RMP, however, projects are being planned and implemented to be as consistent with the intent and direction of both the 1995 and 2008 ROD/RMPs as is possible.

Conclusions

Analysis of the fiscal year 2011 monitoring results concludes that the Roseburg District has complied with all Resource Management Plan management action/direction with the exceptions discussed above.

Monitoring Report Fiscal Year 2011

All Land Use Allocations

Expected Future Conditions and Outputs

Protection of SEIS special attention species so as not to elevate their status to any higher level of concern.

Implementation Monitoring

Due to ongoing litigation, current BLM guidance is for all projects to comply with either the *2001 Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage Protection Buffer, and other Mitigation Measures Standards and Guidelines* (without Annual Species Reviews) or one of the four exemptions in the October 11, 2006, Court stipulation in **Northwest Ecosystem Alliance v. Rey**. Note: The stipulation outlines exemptions to survey and management requirements, also known as the “Pechman exemptions”, outlined as follows:

- (a) Thinning projects in stands younger than 80 years old;
- (b) Replacing culverts on roads that are in use and part of the road system, and removing culverts if the road is temporary or to be decommissioned;
- (c) Riparian and stream improvement projects where the riparian work is riparian planting, obtaining material for placing in-stream, and road or trail decommissioning; and where the stream improvement work is the placement large [*sic*] wood, channel and floodplain reconstruction, or removal of channel diversions; and
- (d) The portions of projects involving hazardous fuel treatments where prescribed fire is applied. Any portions of a hazardous fuel treatment project involving commercial logging will remain subject to the survey and manage requirements except for thinning of stands younger than 80 years old under subparagraph (a) of this paragraph.

BLM issued a record of decision in July, 2007 to amend the plans within the Northwest Forest Plan area to remove the survey and manage mitigation measures. In January, 2008 a lawsuit was filed, and in December, 2009 the presiding judge issued an Order granting Plaintiffs motion for partial summary judgment.

A settlement agreement between the parties was approved by the court on July 6, 2011. The agreement stipulates that projects within the range of the northern spotted owl are subject to the survey and management standards and guidelines in the 2001 ROD without subsequent 2001-2003 Annual Species Reviews as modified by the 2011 Settlement Agreement. The Settlement Agreement modifies the 2001 Survey and Manage species list; establishes a transition period for application of the species lists; acknowledges existing exemption categories (2006 Pechman Exemptions); and establishes exemptions from surveys for certain activities.

The 2008 RMP revision did not include management objectives or direction for Survey and Manage Species. However, the Settlement Agreement applies to the 2008 ROD/RMPs until the BLM conducts further analysis and decision making pursuant to the National Environmental Policy Act and issues a Record of Decision to supersede the Survey and Manage mitigation measures.

Monitoring Question 1:

Are surveys for the species listed in Appendix H conducted before ground disturbing activities occur?

Monitoring Requirements

1. At least 20 percent of all management actions will be examined prior to project initiation and re-examined following project completion, to determine if: surveys are conducted for species listed in Appendix H, protection buffers are provided for specific rare and locally endemic species and other species in the upland forest matrix, and sites of species listed in Appendix H are protected.

Monitoring Performed

Swiftwater Resource Area – Adams Apple Commercial Thinning
Darth Raider Commercial Thinning and Density Management

South River Resource Area – Olly Cat Density Management
Dagnet Commercial Thinning and Density Management

Findings

Swiftwater Resource Area – Adams Apple Commercial Thinning and Darth Raider Commercial Thinning and Density Management

The treated stands were between 39 and 66 years old, and as such were exempt from the Survey and Manage standards and guidelines under Pechman exemption “a.”

South River Resource Area – Olly Cat Density Management

As described in the Olalla-Lookingglass LSR Density Management Environmental Assessment, the stands selected for treatment ranged in age from 42-to-61 years old, and as such were exempt from Survey and Manage standards and guidelines under Pechman exemption “a”.

As part of implementation of the Oregon/Washington BLM Special Status Species program, the environmental assessment addressed the habitat needs, potential presence, and potential effects to the Chace sideband snail (*Monadenia chaceana*), green sideband snail (*Monadenia fidelis beryllica*), Oregon shoulderband snail (*Helminthoglypta hertleini*), Townsend’s big-eared bat (*Corynorhinus townsendii*), Pacific pallid bat (*Antrozous pallidus pacificus*), and fringed myotis bat (*Myotis thysanodes*).

As documented in the Olly Cat Density Management Decision Document, none of these snail species were located in protocol surveys of suitable habitat.

As described in the environmental assessment, caves, mines, or suitable rock outcrops which serve as the primary roosting and hibernating structures used by these bat species are not present in the proposed units. Density management would reserve, except where necessary to mitigate safety hazards or clear road rights-of-way, large remnant trees that could provide roosting habitat. Roosting opportunities for these bat species could be reduced under such circumstances, but such limited removal would not be expected to result in the extirpation of these bat species, if present, from the project area. Density management would benefit these species by accelerating the development of large trees suitable for roosting.

South River Resource Area – Dragnet Commercial Thinning and Density Management

As described in the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment, the stands selected for treatment ranged in age from 43 to 64 years old, and as such were exempt from Survey and Manage standards and guidelines under Pechman exemption “a”.

As part of implementation of the Oregon/Washington BLM Special Status Species program, the environmental assessment addressed the habitat needs, potential presence, and potential effects to the Chace sideband snail (*Monadenia chaceana*), Oregon shoulderband snail (*Helminthoglypta hertleini*), purple martin (*Progne subis*), Townsend’s big-eared bat (*Corynorhinus townsendii*), Pacific pallid bat (*Antrozous pallidus pacificus*), and fringed myotis bat (*Myotis thysanodes*).

As stated in the Dragnet Commercial Thinning and Density Management Decision Document, surveys of suitable habitat in Units 3, 4 and 5 were conducted in accordance with established protocol, but neither of the snail species was located.

As discussed in the environmental assessment, while large green trees suitable for purple martin nesting would be reserved from harvest, some snags suitable for nesting in Unit 31-7-13B (Unit 5) would likely be felled for safety reasons. Disturbance from operations could occur during nesting season resulting in displacement of nesting birds. Occupancy and use of the stand is unknown and any effects to purple martins would be negligible when considered at the population scale.

As discussed in the environmental assessment, the three species of bats use similar habitat for hibernacula that includes caves and mines. They also use similar roosting habitats that include large snags and tree hollows. There are some snags suitable for roosting in Unit 31-7-13B (Unit 5) which would likely be felled for safety reasons. Occupancy and use of the stand is unknown and any effects to these bat species would be negligible when considered at the population scale. Density management would be beneficial in that development of herbaceous and shrub communities would favor insect populations upon which these bats feed.

South River Resource Area – Olalla Creek – Lookingglass Creek Watershed Instream Habitat Restoration

This project consisted of the placement of large logs and boulders in reaches of Thompson Creek and Muns Creek in the Olalla Creek-Lookingglass Creek watershed. The project was exempt from Survey and Manage standards and guidelines, qualifying under Pechman exemption “c.”

Approximately 44 logs were placed at numerous locations in a roughly one-half mile reach of Thompson Creek using an excavator working within or adjacent to the stream channel. All logs were acquired from a commercial source. Boulders up to one cubic-yard in size were placed near structures to provide additional habitat, and structural stability and integrity. In addition, three trees were pulled or pushed over into the stream channel.

The project was accomplished in concert with Partnership for the Umpqua Rivers and the Oregon Department of Fish and Wildlife who were responsible for placement of structures in upstream reaches on private lands.

Approximately 70 logs were placed in a roughly one-half mile reach of Muns Creek located entirely on BLM-administered lands. Boulders were also used to add structural stability and integrity. Placement was accomplished using an excavator operating from existing roads or designated access points.

Monitoring Question 2:

Are protection buffers being provided for specific rare and locally endemic species and other species in the upland forest matrix?

Monitoring Performed:

Swiftwater Resource Area – N/A
South River Resource Area – N/A

Monitoring Question 3:

Are the sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix H being protected?

Monitoring Performed:

Swiftwater Resource Area – N/A
South River Resource Area – N/A

Monitoring Question 4:

Are the sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix H being surveyed?

Monitoring Performed:

Swiftwater Resource Area – N/A
South River Resource Area – N/A

Monitoring Question 5:

Are high priority sites for species management being identified?

Monitoring Performed:

Swiftwater Resource Area – N/A
South River Resource Area – N/A

Monitoring Question 6:

Are general regional surveys being conducted to acquire additional information and to determine necessary levels of protection for arthropods, fungi species that were not classified as rare and endemic, bryophytes, and lichens?

Monitoring Performed:

General regional surveys are normally coordinated and funded through the BLM Oregon State Office. The Roseburg District did not assist with any regional surveys in FY 2011.

Conclusion:

ROD/RMP requirements have been met.

Riparian Reserves

Expected Future Conditions and Outputs

See Aquatic Conservation Strategy Objectives.

Provision of habitat for special status and SEIS special attention species.

Implementation Monitoring

Monitoring Question 1:

Is the width of the Riparian Reserves established according to ROD/RMP management direction?

Monitoring Requirement:

At least 20 percent of regeneration harvest activities within each resource area completed in fiscal year 2011 will be examined to determine whether the widths of the Riparian Reserves were maintained.

Monitoring Performed:

Swiftwater Resource Area – N/A

South River Resource Area – N/A

Findings:

N/A

Conclusion:

ROD/RMP requirements were met.

Monitoring Question 2:

Are management activities in Riparian Reserves consistent with SEIS Record of Decision Standards and Guidelines, and ROD/RMP management direction?

Monitoring Requirement:

At least 20 percent of management activities within Riparian Reserves completed in fiscal year 2011 will be examined, to determine whether the actions were consistent with the SEIS Record of Decision Standards and Guidelines and ROD/RMP management direction. In addition to reporting the results of this monitoring, the Annual Program Summary will also summarize the types of activities that were conducted or authorized within Riparian Reserves.

Monitoring Performed:

Swiftwater Resource Area - Adams Apple Commercial Thinning
Darth Raider Commercial Thinning and Density Management

South River Resource Area – Olly Cat Density Management
Dagnet Commercial Thinning and Density Management

Findings:

Swiftwater Resource Area - Adams Apple and Darth Raider projects.

A portion of the Darth Raider Commercial Thinning and Density Management project was in the Late-Successional Reserve Land Use Allocation. This land use allocation supersedes Riparian Reserves in the land use allocation hierarchy. For all streams adjacent to thinning units, to protect stream channel morphology, streambank stability, and riparian habitat, a variable width no-harvest buffer was established along all streams. The buffer width averaged approximately 40 feet on non-fish bearing streams and 100 feet on fish bearing streams. The objective of the density management outside of this buffer area was to develop late seral forest structure and enhance existing diversity by accelerating tree growth to promote larger trees and canopies, and provide a future source of large woody debris for stream structure. For specific BMPs implemented within the projects, see Water and Soils Monitoring Question #1 on page 103.

South River Resource Area – Olly Cat Density Management

The Olly Cat Density Management project is located entirely within Late-Successional Reserves. This land use allocation supersedes Riparian Reserves in the land use allocation hierarchy.

As prescribed in the Olalla-Lookingglass LSR Density Management Environmental Assessment (p. 6), streams adjacent to thinning units were given a 20 foot minimum “no harvest” buffer and a 50 foot minimum “no-harvest” buffer on all fish-bearing streams. As implemented, “no-harvest” buffers along fish bearing streams varied in width based on specific site conditions including topography and slope stability and exceeded the 50 foot minimums. Trees reserved in Riparian Reserves including within the “no-harvest” buffer were sufficient to provide short and long term sources of instream functional wood to stream channels and provide channel and stream bank stability. Stream bank stability and vegetation was retained by these buffers and an adequate filter strip was present to prevent overland transport of sediment from the harvest units.

No ground-based equipment operations were to be allowed within the “no-harvest” buffers. If necessary to fell trees within the “no-harvest” buffers for operational purposes, the felled trees would be left in place to provide instream wood and protection for stream banks. The need for cable yarding corridors across streams would be clearly demonstrated by the purchaser. Corridors would be limited to a maximum width of 20-feet and laid out perpendicular to stream channels at locations and in a manner approved by the contract administrator.

For areas adjacent to streams but outside of the “no-harvest” buffers, the silvicultural prescription was for removal of trees from the suppressed and intermediate canopy classes and general retention of trees 20 inches or greater diameter breast height. Variable density thinning would be applied using a combination of light, moderate and heavy thinning in conjunction with retention of at least ten percent of unit acres in unthinned areas and creation of gaps up to 0.8 acres in size, not to exceed two percent of unit acres. Average canopy closure was projected to remain at or above 60 percent, dependent on the thinning intensity.

South River Resource Area – Dragnet Commercial Thinning and Density Management

Five of the six units constituting the Dragnet Commercial Thinning and Density Management project are located within the Matrix allocations, while Unit 5 is located in Late-Successional Reserve where the land use allocation supercedes Riparian Reserves in the land use allocation hierarchy.

As prescribed in the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment Environmental Assessment (p. 4) minimum “no-harvest” buffers were established on all stream channels. For units in the Drag Net sale, there were only two intermittent, non-fish bearing stream that were adjacent to sale units. The applied buffers on these streams exceeded the 20 feet (slope distance measured from the top of the stream bank) minimum for non-fish bearing streams and in most cases were about 50 feet. These buffers provided appropriate protection for stream bank integrity, maintain streamside shade, and provided adequate filtering strip for any potential overland run-off. Trees remaining in the Riparian Reserves including inside the “no-harvest” buffer were sufficient to provide short and long term supplies of instream functional wood to help maintain channel stability.

The sale was harvested exclusively with cable-yarding equipment, so no ground-based operations occurred within the Riparian Reserve or Late-Successional Reserve. No yarding corridors were required across either of the streams, so it was not necessary to fell any trees in the “no-treatment” buffers to clear yarding corridors.

A variable density marking prescription was employed that was designed to retain canopy closure of 40 to 70 percent outside of the “no-treatment” buffers.

Conclusion:

ROD/RMP requirements were met.

Late-Successional Reserves

Implementation Monitoring

Monitoring Question 1:

Were activities conducted within Late-Successional Reserves consistent with SEIS Record of Decision

Standards and Guidelines, ROD/RMP management direction and Regional Ecosystem Office review requirements?

Monitoring Requirements:

At least 20 percent of the activities that were completed in fiscal year 2011 within Late-Successional Reserves will be reviewed in order to determine whether the actions were consistent with SEIS Record of Decision Standards and Guidelines, ROD/RMP management direction and Regional Ecosystem Office review requirements.

Monitoring Performed:

Swiftwater Resource Area – Darth Raider Commercial Thinning and Density Management and Review of Swiftwater Late-Successional Reserve activities.

South River Resource Area – Olly Cat Density Management, Unit 5 of Dragnet Commercial Thinning and Density Management, and Review of South River Late-Successional Reserve Activities

Findings:

Swiftwater Resource Area - Darth Raider Commercial Thinning and Density Management was designed to meet the treatment specifications from the SEIS Record of Decision Standards and Guidelines, ROD/RMP management direction and REO exemption criteria. Silvicultural prescriptions included maintaining tree spacing to create variable stand densities and retain or create snags and coarse woody debris to meet the Late-Successional Reserve Assessment guidelines. Review of activities showed projects within LSRs included manual maintenance of seedlings, precommercial thinning, and reforestation surveys. These activities meet the criteria for exemption from Regional Ecosystem Office review or are consistent with the LSR Assessment and are also consistent with the SEIS ROD and ROD/RMP.

South River Resource Area – Olly Cat Density Management was designed to meet the treatment specifications from the SEIS Record of Decision Standards and Guidelines, ROD/RMP management direction, and REO exemption criteria.

As described in the Olalla-Lookingglass LSR Density Management Environmental Assessment (pp. 4-6), three types of thinning treatments would be applied, individually or in combination, within the proposed density management units to break up stand homogeneity and accentuate landscape diversity across the project area. Light thinning would retain 90 to 100 trees per acre, moderate thinning would retain 60 to 80 trees per acre, and heavy thinning would retain approximately 50 trees per acre. Unthinned areas and openings would also be interspersed within the units. Ponderosa pine, western redcedar, Douglas-fir, and incense-cedar would be planted in the openings and heavy thinning areas, based on site conditions.

At least ten percent of the treated area would remain unthinned to retain processes and conditions, such as thermal and visual cover, natural suppression and mortality, small trees, natural size differentiation, and undisturbed coarse woody debris. Openings would be up to 0.8 acres in size and would be limited to two percent of the total treated acres. Heavily thinned areas would not exceed 50 percent of the total treated acres.

Trees would be removed primarily from the suppressed and intermediate canopy classes, with trees 20 inches or larger in diameter at breast height generally marked for retention.

Sound hardwood and conifer snags would be retained and protected to the greatest degree practicable. This would be accomplished by marking rub trees around the snags or by including snags in untreated areas. Where snag retention would pose an unacceptable safety risk or where retention of unthinned groups of trees would conflict with project objectives, snags would be cut and retained on site as coarse woody debris to supplement existing down wood in Decay Classes 3, 4, and 5 retained under contract provisions.

To maintain structural and habitat diversity, retention tree selection would not be based solely on the healthiest best formed trees but would include trees with broken or deformed tops that could provide future roosting and nesting structure. Hardwoods selected for retention would generally be greater than 10 inches and exhibit a reasonable likelihood of surviving the density management treatment. Less common (numerous) conifer species would also be favored for retention, in sufficient numbers to maintain them as stand components.

Future need for additional snags and coarse wood are provided for as discussed in the Olalla-Lookingglass LSR Density Management Environmental Assessment (pp. 10-11).

Three types of thinning treatments were applied, individually or in combinations, within the density management units to break up stand homogeneity and accentuate landscape diversity across the project area. Light thinning retained 90 to 100 trees per acre, moderate thinning retained 60 to 80 trees per acre, and heavy thinning retained approximately 50 trees per acre. Unthinned areas and openings were also interspersed within the units. To maintain or enhance structural and habitat diversity, tree selection included trees with broken or deformed tops up to two trees per acre. In general intermediate and suppressed trees were targeted for removal.

In Units 3, 7, 8, 9, 10, 11 and 12 all trees 20 inches or greater diameter breast height were marked for retention, including all hardwood trees greater than 12 inches diameter breast height. In Units 1, 2, 4, 5, 6 and 13 all trees 19 inches and greater diameter breast height were marked for retention, as were all hardwood trees greater than 10 inches diameter breast height.

For all units snags 16 inches or greater and at least 16 feet tall were marked where likely to survive the thinning operation. The first ring of live trees around the snags were marked to provide protection during the operation. Cedar were marked on an 18 foot spacing were they occurred within the units, except near roads. No Port-Orford-cedar were marked within 20 feet of the uphill side or 50 feet from the downhill side of roads. All Pacific yew greater than 6 inches at DBH were marked.

South River Resource Area – Unit 5 of Dragnet Commercial Thinning and Density Management was designed to meet the treatment specifications from the SEIS Record of Decision Standards and Guidelines, ROD/RMP management direction, and REO exemption criteria.

As described in the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment (pp. 4-5), treatments would be designed to mimic natural disturbances that reduce stand density and move stand development toward late-successional conditions presented in the *South Coast-Northern Klamath LSRA* (p. 28 and 82). Canopy gaps, openings, and retention of unthinned areas would be created to break up stand homogeneity and accentuate landscape diversity across the project area. Trees greater than 20 inches in diameter breast height would generally be reserved. Snags would be retained and protected to the greatest extent practical by surrounding them with rub trees or unthinned areas. Where felled for operational reasons they would be retained on site to supplement existing coarse wood.

Three types of thinning treatments would be applied. Light thinning would retain 90 to 100 trees per acre, with moderate thinning retaining 60 to 80 trees per acre, and heavy thinning retaining approximately 50 trees per acre. At least ten percent of the area within individual units would remain unthinned to maintain processes

and conditions in their present state. Retention tree selection would not be based solely on the healthiest and best formed trees, but would include trees with broken or deformed tops that could provide future roosting and nesting structure. Hardwoods selected for retention would generally be greater than 10 inches dbh and exhibit a reasonable likelihood of surviving density management operations. Minor conifer species such as western red cedar, incense cedar, and Pacific yew would be favored for retention to maintain them as stand components.

Openings and gaps could be up to one and one-half acre in size and would be limited to two percent of the total treated acres. Heavily thinned areas would not exceed 50 percent of the total treated acres. A combination of ponderosa pine, western red cedar, Douglas-fir, sugar pine, disease-resistant Port-Orford-cedar and/or incense-cedar would be planted in the openings and heavy thinning areas, based on site conditions.

Future need for additional snags and coarse wood are provided for as discussed in the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment (pp. 5-6).

A review of the application of the marking prescription found the following. Thirteen acres were marked to moderate thinning levels leaving approximately 70 trees to the acres and 80 square feet of basal area. Five acres were marked to approximately 100 trees per acres and 100 square feet of basal area. To promote variability all trees 20 inches or larger diameter breast height were marked for retention and the spacing varied up to 25 percent. All healthy cedar trees 10 inches or greater diameter breast height were marked. Hard conifer and hardwood snags 16 inches diameter breast height or larger and at least 20 feet in height were marked where they are considered likely to survive thinning operations. The first ring of live trees around these snags were marked to provide protection during the harvest operation. All hardwoods 12 inches or greater diameter breast height were marked for retention. To maintain structural and habitat diversity, tree selection included up to two trees per acres with broken or deformed tops. In the unit, all trees within 20 feet of either side of the stream were marked for retention. Outside of the streamside “no harvest” area the same marking prescription was applies as in the upland area.

South River Resource Area LSR Program Review – Management activities conducted in the LSRs consisted of 103 acres of manual maintenance of seedlings (brushing), 129 acres of reforestation, and 126 acres of pruning. Pre-commercial thinning was applied to 156 acres.

Conclusion:

ROD/RMP objectives were met.

Little River Adaptive Management Area

Implementation Monitoring

Monitoring Question 1

What is the status of the development of the Little River Adaptive Management Area plan, and does it follow management action/direction in the ROD/RMP (pages 83 and 84).

Monitoring Requirements

Report the status of AMA plan in Annual Program Summary as described in Question 1.

Monitoring Performed:

Little River AMA plan reviewed.

Findings:

In October, 1997 REO reviewed a draft of the Little River AMA plan. Both Roseburg BLM and Umpqua National Forest are currently operating under the draft plan. No strategy has been developed yet to finalize the draft plan.

Conclusion:

ROD/RMP requirements have not been met

Matrix

Implementation Monitoring

Monitoring Question 1:

Is 25-30 percent of each Connectivity/Diversity Block maintained in late-successional forest condition as directed by ROD/RMP management action/direction for regeneration harvest?

Monitoring Requirements

At least 20 percent of the files on each year's regeneration harvests involving Connectivity/Diversity Blocks will be reviewed annually to determine if they meet this requirement.

Monitoring Performed:

Swiftwater Resource Area – N/A
South River Resource Area – N/A

Findings:

Swiftwater Resource Area – N/A
South River Resource Area - N/A

Conclusion:

ROD/RMP requirements have been met.

Air Quality

Expected Future Conditions and Outputs

Attainment of National Ambient Air Quality Standards, Prevention of Significant Deterioration goals, and Oregon Visibility Protection Plan and Smoke Management Plan goals.

Maintenance and enhancement of air quality and visibility in a manner consistent with the Clean Air Act and the State Implementation Plan.

Implementation Monitoring

Monitoring Question 1:

Were efforts made to minimize the amount of particulate emissions from prescribed burns?

Monitoring Requirements

At least twenty percent of prescribed burn projects carried out in fiscal year 2009 will be monitored to assess what efforts were made to minimize particulate emissions.

Monitoring Performed:

Swiftwater Resource Area – North Bank Habitat Management Area

South River Resource Area - Program Review

Findings:

Swiftwater Resource Area – Particulate emissions from the broadcast prescribed burns and pile burns were within standards. Smoke clearance was obtained from ODF and the burns were ignited during weather conditions that favored good smoke dispersion. An unstable air mass provided good vertical lifting and mixing, helping disperse the smoke. Mop-up of the North Bank Habitat Management Area broadcast burns was needed to reduce impact of smoke to sensitive areas. No mop-up was planned or needed for pile burns as seasonal rains extinguished the small amount of slash not consumed by fire. No smoke intrusion occurred within any of the “Designated Areas” managed by the State.

South River Resource Area - Program Review

No broadcast burning occurred in the South River Resource Area during fiscal year 2011. Prescribed burning of landing piles occurred on commercial thinning units during the wet season when weather conditions favored good smoke dispersion. The landing piles contained well cured materials. No mop-up was planned or needed for pile burns as seasonal rains extinguished the small amount of slash not consumed by fire. No smoke intrusion occurred within any of the “Designated Areas” managed by the State.

Conclusion:

ROD/RMP requirements were met.

Water and Soils

Expected Future Conditions and Outputs

Restoration and maintenance of the ecological health of watersheds. See Aquatic Conservation Strategy Objectives.

Improvement and/or maintenance of water quality in municipal water systems.

Improvement and/or maintenance of soil productivity.

Reduction of existing road mileage within Key Watersheds or at a minimum no net increase.

Implementation Monitoring

Monitoring Question 1:

Are site specific Best Management Practices (BMP), identified as applicable during interdisciplinary review, carried forward into project design and execution?

Monitoring Requirement:

At least 20 percent of the timber sales and silviculture projects will be selected for monitoring to determine whether or not Best Management Practices were planned and implemented as prescribed in the EA. The selection of management actions to be monitored should include a variety of silvicultural practices, Best Management Practices, and beneficial uses likely to be impacted where possible given the monitoring sample size.

Monitoring Performed:

Swiftwater Resource Area – Adams Apple Commercial Thinning
Darth Raider Commercial Thinning and Density Management
South River Resource Area – Olly Cat Density Management
Dagnet Commercial Thinning and Density Management

Findings:

Swiftwater Resource Area – Adams Apple Commercial Thinning:

Project design features applied to the Adams Apple Commercial Thinning included:

1. To protect riparian habitat:
 - a. To protect aquatic resources within riparian areas a variable width streamside no-harvest buffer would be established along all streams. The buffer width would be between 20 and 60 feet, measured from the edges of the stream channel for all non-fish bearing streams. A 100-foot no harvest buffer would be established along the fish-bearing streams (i.e. Adams Creek and Elk Creek).

- b. No equipment operation would be allowed within the “no-harvest” buffers. If necessary to fell trees within the “no-harvest” buffers for operational purposes, the felled trees would be left in place to provide in-stream wood and protection for stream banks.
 - c. The integrity of the riparian habitat would be protected from logging damage by directionally felling trees away from or parallel to the Riparian Reserve (BMP I B2; RMP, pg. 130).
 - d. Prior to attaching any logging equipment to a reserve tree, precautions to protect the tree from damage would be taken. Examples of protective measures include cribbing (use of sound green limbs between the cable and the bole of the tree to prevent girdling), tree plates, straps, or plastic culverts. If, for safety reasons, it would be necessary to fall a reserve tree in the Riparian Reserves then it would be left as coarse woody debris.
2. Measures to limit soil erosion and sedimentation from roads would consist of:
 - a. Maintaining existing roads to fix drainage and erosion problems. This would consist of maintaining existing culverts, replacing culverts, constructing drainage-relief ditches, stabilizing unstable cut and fill slopes, and replenishing road surface with crushed rock where deficient (BMP II H; RMP, pg. 137). In-stream work would be limited to periods of low or no flow (between July 1st and September 15th).
 - b. Restricting road work (including construction, renovation, re-alignment, and decommissioning) and log hauling on naturally surfaced roads to the dry season, which is normally May 15th to October 15th. Operations during the dry season would be suspended during periods of unseasonably wet weather. This season could be adjusted if unseasonable conditions occur (e.g. an extended dry season beyond October 15th or wet season beyond May 15th).
 - c. For new road construction, new cut and fill slopes would be mulched with weed-free straw, or equivalent, and seeded with a native or sterile hybrid mix.
 - d. Over-wintering natural surface spur roads in a condition that is resistant to erosion and sedimentation. This would be done by building, using, and winterizing natural surface spur roads prior to the end of the operating season. Winterization would include: installation of waterbars, mulching the running surface with weed-free straw, seeding and mulching bare cut and fill surfaces with native species (or a sterile hybrid mix if native seed is unavailable), and blocking. Implementation of over-wintering measures would be restricted to the dry season (normally May 15th to October 15th).
 3. Measures to limit soil erosion and sedimentation from logging would consist of:
 - a. Use of cable logging systems that limit ground disturbance. This would include the use of partial or full suspension (BMP I C1a; RMP, pg. 130). In some areas, partial suspension may not be physically possible due to terrain. Where excessive soil furrowing occurs, it would be hand waterbarred and filled with limbs or other organic debris.
 - b. Limiting ground-based logging to the dry season (normally May 15th to October 15th; BMP I C2d; RMP, pg. 131).

4. Measures to limit soil compaction and loss of organic material would consist of:
 - a. Limiting ground-based logging in all units and subsoiling to the dry season (May 15 to Oct. 15) when soils are least compactable (BMP I C2d; RMP, pg. 131). If soil moisture levels would cause the amount of compaction to exceed 10 percent or more of the ground-based area, operations would be suspended during unseasonably wet weather in the dry season. The soil scientist and the contract administrator would monitor soil moisture and compaction to determine when operations may need to be suspended.
 - b. Machines used for ground-based logging would be limited to a track width no greater than 10.5 feet (BMP I C2j; RMP, pg. 131). Skid and forwarder trails would be limited to slopes less than 35 percent (BMP I C2b; RMP, pg. 131). Yarding would be confined to designated skid and forwarder trails (BMP I C2c; RMP, pg. 131). Skid trails would have an average spacing of at least 150 feet apart and harvester/forwarder trails would be spaced at least 50 feet apart where topography allows. Old skid trails would be used to the greatest extent practical. Harvesters would be limited to slopes less than 45 percent for distances less than 150 feet.
 - c. Harvesters would cut trees less than twelve inches above the ground to allow subsoiling excavators to pass over the stumps.
 - d. Harvesters would place tree limbs in the trails in front of the equipment to minimize compaction. Slash would be placed near the boles of the reserved trees to protect the large roots at or near the surface.
 - e. Burning of slash during the late fall to mid-spring season when the soil, duff layer (soil surface layer consisting of fine organic material), and large down log moisture levels are high (BMP III D1b, pg. 140). This would confine burn impacts to the soil underneath the piles and lessen the depth of the impacts (i.e., loss of organic matter, and the change of soil physical properties, ecology and soil nutrients).
5. Measures to protect slope stability would consist of:
 - a. New spur roads and realigned road segments would be located on geologically stable areas (BMP II B2; RMP, pg. 132) constructed with a narrow road width (i.e. maximum of 14 foot running surface) to minimize soil disturbance (BMP II C6; RMP, pg. 132). Road construction on side slopes greater than 45 percent would be full-bench construction with no sidecasting.
 - b. Cable yarding would not be permitted on very steep slopes (i.e. 70 percent and greater) when soil moisture levels are high enough to squeeze water from soil samples by hand. Soil moisture would be considered too high if cable yarding creates glazed imprints on the soil and channels water downslope. This generally occurs when the soil moisture is greater than 30 percent.

Project design features applied to the Darth Raider Commercial Thinning included:

1. Measures to minimize erosion and sedimentation effects to aquatic species:
 - a. To protect aquatic resources within riparian areas, a variable width streamside no-harvest buffer has been established along all streams and wet areas. The variable buffer width is ten to 60 feet from the outer edge of the active stream channel for all non-fish bearing streams. The buffer width varies to include areas of instability, areas of riparian vegetation, and sensitive areas identified during site review. There are no fish bearing streams adjacent to the harvest units. –
 - b. At a minimum, one-tree retention has been maintained along the stream bank for bank stability. Minimum buffer widths have been used primarily on first order ephemeral or highly interrupted intermittent streams. These streams lack riparian vegetation, riparian habitat components, soil stability issues, and potential impact to downstream fisheries. Management within the buffer could include selected felling and/or girdling of trees where doing so will benefit riparian habitat. Trees will not be commercially removed from this buffer area.
 - c. Stream channels and riparian habitat will be protected from logging damage by directionally felling trees that are within 100 feet of streams away from the streams and yarding logs away from or parallel to the streams.
 - d. Yarding corridors parallel to non-fish bearing streams will be at least 40 feet way from the edge of the active stream channel and will be avoided along swale bottoms.
 - e. Skyline yarding is required where cable logging is specified. This method will limit ground disturbance by requiring at least partial suspension during yarding. For all cable yarding, corridors will be 15 feet in width or less.
 - f. Partial suspension and waterbarring yarding trails that are excessively furrowed will reduce the risk of slope failure and limit erosion. Partial suspension lifts (i.e. suspends) the front end of the log during in-haul to the landing, thereby lessening the “plowing” action that disturbs the soil. In some limited, isolated areas partial suspension may not be physically possible due to terrain or lateral yarding. Excessive soil furrowing that occurs from “plowing” action will be hand waterbarred and filled with logging slash and/or other organic debris.
2. Measures to limit soil erosion and sedimentation from roads would consist of:
 - a. Erosion control measures (waterbarring, seeding, mulching, straw bales, bioengineering, etc.) will be applied where needed on newly constructed roads, renovated roads, improved roads, or decommissioned roads and spurs.
 - b. Over-wintering natural surface spur roads in a condition that is resistant to erosion and sedimentation. This would be done by building, using, and winterizing natural surface spur roads prior to the end of the operating season.
 - c. Winterization of natural surface roads would include: installation of waterbars, mulching the running surface with weed-free straw, seeding and mulching bare cut and fill surfaces with native species (or a sterile hybrid mix if native seed is unavailable), and blocking. Implementation of over-wintering measures would be restricted to the dry season (normally May 15th to October 15th).

- d. All haul routes used during wet season hauling will be inspected prior to haul activities to assess the current conditions of those roads as they pertain to sedimentation concerns to adjacent streams. Where winter haul occurs along a rocky route with defined stream crossings, road design is currently adequate. Project design features that reduce sedimentation such as silt fences, gravel lifts, and weather dependent operation specifications will prevent sediment contribution to live streams. Activities will be suspended when conditions are such that meaningfully, measurable stream-sedimentation will occur. The suspension will be lifted when conditions improve or remediation measures are implemented.
3. Measures to limit soil erosion and sedimentation from logging would consist of:
 - a. Ground-based operations will only occur when soil moisture conditions limit effects to soil productivity. These conditions generally occur between May 15th and the onset of regular fall rains [typically October 15th].
 - b. Partial suspension and water barring yarding trails that are excessively furrowed will reduce the risk of slope failure and limit erosion. Partial suspension lifts (i.e. suspends) the front end of the log during in-haul to the landing, thereby lessening the “plowing” action that disturbs the soil. In some limited, isolated areas partial suspension may not be physically possible due to terrain or lateral yarding. Excessive soil furrowing that occurs from “plowing” action will be hand waterbarred and filled with logging slash and/or other organic debris
 4. Measures to limit soil compaction and loss of organic material would consist of:
 - a. During ground-based operations, soil moisture levels usually must be below 20 percent to a depth of ten inches. In some situations soil moisture levels would need to be considerably less than 20 percent including: low slash levels, adverse skidder/forwarder haul up the steeper ground-based slopes, and harvesters on slopes 35 to 45 percent. After ground-based operations have begun, certain topographic positions that normally dry slower (e.g. depressions, swale bottoms and north-facing slopes) may need to be avoided or yarded later. The Contract Administrator will approve all ground-based operation start-up dates. Stop work orders can be issued if unseasonably wet conditions develop during the dry season that increases soil moisture above acceptable levels.
 - b. Forwarder, skid, and swing yarding trails will be designated. The forwarder will operate on branch and limb covered areas traversed by the harvester.
 - c. Skid trails which were created by prior entries will be re-used to the extent practical.
 - d. Ground-based operations will be limited to slopes less than 35 percent. A harvester will be allowed on slopes between 35 and 45 percent for short slope pitches (up to 150 feet).
 - e. To mitigate for soil compaction, approximately 0.6 miles of roadbed (as described previously on page 5) will be subsoiled. In addition, approximately 2.5 miles of skid trails, landings, and unnumbered natural-surfaced roads will be subsoiled. Subsoiled trails and road beds will be mulched with logging slash where available or with weed free straw if logging slash is not available. In addition, some topsoil will be pulled back onto the sub-soiled surface from immediately adjacent areas.
 - f. Slash piles will be burned during the late fall to mid-spring season when the soil and duff layer moisture levels are high (ROD/RMP, pg. 140) and the large down logs have not dried. This practice will confine burn impacts to the soil underneath the piles and will lessen the depths of impacts (i.e., loss of organic matter, and the change of soil physical properties, ecology and soil nutrients).

5. Measures to protect slope stability would consist of:
 - a. Roads will be located on ridge tops and on stable slopes. All road construction, renovation, improvement, and decommissioning will occur during dry periods of the year, generally between May 15 and the onset of regular fall rains or as determined by weather patterns.
 - b. On very steep slopes (70 percent and greater) accessed by the rocked 24-7-18.1 road, no cable yarding shall be permitted when soil moisture levels are high enough to squeeze water from soil samples. The soil would be too wet if cable yarding would create glazed imprints on the soil surface that would channel water downslope – generally greater than 30 percent soil moisture.

These project design features were carried forward and implemented in the Adams Apple Commercial Thinning and Darth Raider Commercial Thinning with the exception of subsoiling in Darth Raider Commercial Thinning. Subsoiling will be completed in fiscal year 2012. Most of the streams in the Adams Apple and Darth Raider projects had no-harvest stream buffers of 40-60 feet.

South River Resource Area – Olly Cat Density Management

The Olalla-Lookingglass LSR Density Management Environmental Assessment, of which Olly Cat Density Management was a component, specified (p. 7) that cable yarding equipment would have the capability of maintaining a minimum of one-end log suspension in order to reduce soil compaction and displacement. Yarding corridors would be pre-designated prior to cutting of the timber. Lateral yarding capability of at least 100 feet would be required to minimize the number of yarding corridors, surface area subject to soil displacement and compaction, and the number of required landings.

Cable-yarded areas received minimal soil disturbance with most corridors showing soil displacement of three inches or less in depth, limited to corridors of one to three feet in width. The deepest soil displacement in the yarding corridors was 10 inches in the corridor center, in short, 20-30 foot sections in one corridor in Unit 2. Soil compaction was moderate to high to 3-4 inches depth in the center of disturbed yarding corridors. Most of the yarding corridors were covered with branches, twigs and needles from the harvest operations. In Unit 11, leave trees were designated within an old headwall and eroded channel for soil and slope stability; the leave trees were left intact after the harvest operations.

Unit 3 and portions of Units 5, 7 and 13 were originally designated for harvester/forwarder systems. The manner of harvest operations on Unit 3 was later changed to cable yarding, when an adjacent private land owner reopened a road which allowed access to the top of the unit. A portion of Unit 6 (~14 acres) was harvested with harvester/forwarder equipment, eliminating the need for extensive side-hill yarding. Harvest methods were also modified to allow the use of harvester/forwarder equipment on a gentling sloping portion of area in Unit 8 (~4 acres).

Harvester/forwarder systems were required to operate atop slash to reduce compaction. The harvesters were not be restricted to designated or pre-approved skid trails but were required to have a lateral reach of 20 feet or greater to reduce the number of harvester trails. Forwarders were restricted to operating on designated and approved skid trails, or on slash-covered areas traversed by the harvester. Ground-based harvest operations were restricted to the dry season, typically between May 15th and October 15th.

Harvester/forwarder operations in Units 5, 6, 7, 8 and 13 resulted in approximately five to eight percent of the ground-based harvest areas subjected to soil compaction and displacement, which included main skid trails, landings and large slash piles. These figures are within the plan maintenance threshold of less than 10 percent of ground-based yarded areas being subjected to soil compaction and displacement.

The Olalla-Lookingglass LSR Density Management Environmental Assessment (p. 6) also specified the establishment of “no-harvest” buffers on streams. “No-harvest” buffers were to extend a minimum of 20-foot slope distance as measured from the stream bank and were to be applied on all intermittent streams in the project area. “No-harvest” buffers on intermittent streams serve the purposes of filtering sediment from overland run-off and protecting stream channel morphology.

Perennial and fish bearing streams were to receive a minimum 50-foot slope distance “no-harvest” buffers. “No-harvest” buffers on perennial and fish bearing streams are meant to preserve the primary shade zone by limiting solar radiation and subsequent conductance of warm water downstream in addition to preserving general hydrologic integrity.

Large enough gaps or openings in the canopy – especially within the transient snow zone – allows for snow collection which can rapidly melt in the event of a sudden increase in temperature, rainfall and/or wind. Ensuing peak flow enhancement can be detrimental and potentially result in flooding. Canopy cover was projected not to drop below 40 percent.

“No-harvest” buffers on intermittent, perennial and fish bearing streams were maintained adjacent to all streams based on November 2011 field visits. In preserving these buffers the thermal, sediment, and large wood recruitment components of the Aquatic Conservation Strategy were maintained or improved. Canopy cover was observed to be in excess of 40 percent and peak flow was not impacted. Hydrologic integrity of these areas was maintained and the goals of the Aquatic Conservation Strategy were met.

The following are observations from November 2011:

- Yarding timber uphill in Unit 3, away from the perennial stream running along the bottom of the unit resulted in no impact to the stream. The stream remains in good health.
- The perennial stream running through Unit 4 received a large “no-harvest” buffer and remains stable. The stream channel, banks, and adjacent riparian area remains entirely intact.
- Spur 3 in Unit 7 was constructed quite close to an adjacent spatially interrupted, intermittent stream channel. The stream channel, banks and associated riparian area were not impacted due to the relatively flat terrain.
- The main tributary in Unit 12 was adequately protected with “no harvest” buffers, but now has an abundance of functional woody debris stemming from logging slash and yarding corridors. In this case, stream condition actually improved from pre-harvest conditions.
- All of the intermittent streams in Unit 13 received more than the required “no-harvest” buffers. Streams here, while steep and incised, remain stable.

Nine temporary roads totaling approximately 2.18 miles were to be built and an unsurfaced segment of Road No. 30-8-11.5 was to be renovated. Spurs 4 and 9 were to be blocked after completion of use, while all other unsurfaced roads associated with the project were to be decommissioned by subsoiling, water bars and mulched with slash. The road blocking and decommissioning were completed by October 2010. A temporary stream crossing was originally proposed to access Unit 3. An adjacent private land owner reopened a road from which access to Unit 3 was secured, eliminating the need for the temporary stream crossing.

South River Resource Area – Dragnet Commercial Thinning and Density Management

The Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment, of which Dragnet Commercial Thinning and Density Management was a component, specified (p. 9) that cable

yarding equipment would have the capability of maintaining a minimum of one-end log suspension in order to reduce soil compaction and displacement. Yarding corridors would be pre-designated and spaced at 200-foot intervals to reduce the numbers of yarding corridors and landings required.

These requirements were carried forward in contract provisions which further stipulated that yarding systems would have a minimum of 100 feet of lateral yarding capacity. The timber purchaser used a system of swivel-angled jacks to achieve the needed log suspension during timber yarding, eliminating the need for spur road construction and road renovation.

Cable yarding system resulted in little to no soil displacement in most areas. Where there was ground disturbance, soil displacement in the corridors averaged 2 to 3 inches in depth and one to three feet in width. Isolated sections of deeper soil displacement occurred occasionally, such as where side-hill yarding occurred. In Units 3 and 5, soil displacement of five to eight inches in depth was observed in the center of corridors with surface disturbance one to three feet in width. Most of the yarding corridors were covered with branches, twigs and needles.

In lieu of renovating Road 31-6-17.8 to access the ridge top in Unit 1, logs were yarded uphill and then skidded downhill along the ridge to a lower segment of the road. While the amount of soil disturbance from swing yarding was greater than is seen from uphill yarding, the soil disturbance and displacement was much less than would have occurred with the planned road renovation.

A headwall and soil scarp above a stream inception point in Unit 5 were buffered for soil and slope stability reasons. The leave trees in this buffered area and within the downstream “no-treatment” buffer were left intact after the harvest operations.

The Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment (p. 4) specified that variable-width “no-harvest” buffers would be established on all streams within Riparian Reserve to protect stream bank integrity, maintain streamside shade, and provide a filtering strip for overland run-off. The buffers would be a minimum horizontal distance of 20 feet in width on intermittent non-fish-bearing streams and 50 feet in width on fish-bearing streams. Designation of actual widths would consider habitat features, streamside topography, vegetation, susceptibility to solar heating, and proximity to Essential Fish Habitat.

Large enough gaps in the canopy allows for snow collection which can rapidly melt in the event of a sudden increase in temperature, rainfall and/or wind. Ensuing peak flow enhancement can be detrimental and potentially result in flooding. Canopy cover was projected not to drop below 40 percent.

“No-harvest” buffers on intermittent, perennial and fish bearing streams were maintained adjacent to all streams based on December 2011 field visits. In preserving these buffers the thermal, sediment, and large wood recruitment components of the Aquatic Conservation Strategy were maintained or improved. Canopy cover was observed to be in excess of 40 percent and peak flow was not impacted. Hydrologic integrity of these areas was maintained and the goals of the Aquatic Conservation Strategy were met.

The following are observations from December 2011:

- An intermittent stream was found to have its inception point just east of unit 1 on private property. However, there is a spring above Road 31-6-17.3 Road just above the inception point. While the site needs adequate drainage, the road was not used and was thus not repaired.

- The “no-harvest” area in the immediate vicinity of the two streams in Unit 3 was well protected. While the stream banks look unstable, they were untouched by timber harvest. Yarding corridors contributed additional functional woody debris to the stream channels and thus improved their overall conditions.
- Cross channel yarding across the inception point of the intermittent stream in unit 5 resulted in exposed soil in and adjacent to the stream channel. Due to the fact that the stream is intermittent and the disturbance is limited, vegetation is expected to recover quickly and completely. There was no evidence of sedimentation below the disturbance.

Seven spur roads totaling 2,639 feet in length were to be constructed and 1,054 feet of Road No. 31-6-17.8 was to be renovated. The roads were to be water-barred, seeded and mulched, and blocked to vehicular traffic upon completion of thinning and density management operations. As described above, the need for road construction and renovation was eliminated through operational changes, as was the need for any subsequent road decommissioning. Road 31-6-17.8 in Unit 1 and the beginning of an old road in Unit 4 were blocked to vehicular traffic.

Conclusion:

ROD/RMP requirements were met.

Monitoring Question 2:

Have forest management activities implemented the management direction for ground-based systems and mechanical site preparation as listed in the fiscal year 2001 Plan Maintenance?

Monitoring Requirement:

All ground-based activities, including mechanical site preparation, will be assessed after completion to determine if management direction has been implemented.

Monitoring Performed:

Swiftwater Resource Area – The following timber sales had ground-based yarding and subsoiling accomplished in FY2011: Adams Apple Density Management, Slow Lane Commercial Thinning, Foghorn Cleghorn Commercial Thinning, Johnson Creek Commercial Thinning, and Green Butte Density Management. Darth Raider Density Management had ground based harvest but subsoiling is scheduled for calendar year 2012.

South River Resource Area – Program review identified one timber sale, Olly Cat Density Management, completed in fiscal year 2011 which employed ground-based harvest systems.

Findings:

Swiftwater Resource Area – The ROD/RMP objective to maintain soil productivity was accomplished by applying the project design features as stated in the 2001 Plan Maintenance and the Decision Records for projects. The project design features included: limiting the cumulative (created or used since the adoption of the ROD/RMP) area occupied by main skid trails, landings, and large piles to less than 10 percent of the ground-based harvest units; limiting ground-based equipment operations to slopes less than 35 percent; re-using old skid trails to the extent practical; designating skid and forwarder trails, limiting the operating of ground-

based yarding equipment to the dry season; and subsoiling of landings, main skid/forwarder trails and other trails warranting treatment.

Adams Apple, Slow Lane and Darth Raider, Foghorn Cleghorn all met ROD/RMP harvest requirements. Adams Apple Commercial Thinning tested a feller/buncher operation. The operation successfully kept impacts under the threshold, but approached the upper end of the 10 percent impact area. One unit in Slow Lane exceeded the 10 percent threshold, however the unit was subsoiled. In addition some designated ground based acres on Slow Lane were cable yarded, and thus the ground-based area had lower impacts than planned for. Adams Apple, Slow Lane, Foghorn Cleghorn and Johnson Creek had skid trails subsoiled thus reducing cumulative soil compaction. Darth Raider is scheduled to be subsoiled in calendar year 2012. One unit on Green Butte exceeded the 10 percent threshold. On average all the units Green Butte remained within RMP guidelines. The excessive damage appears to be from unauthorized purchaser created trails.

South River Resource Area – Olly Cat Density Management

Soil productivity was maintained on the Olly Cat Density Management project by the application of project design features described in the Plan Maintenance in the 2001 Annual Program Summary and in the Olalla-Lookingglass LSR Density Management Environmental Assessment, and Best Management Practices from the ROD/RMP.

Measures taken included: minimizing the area cumulatively affected by main skid trails, landings and large slash piles to less than ten (10) percent of the ground-based harvest area; limiting ground-based equipment operations to slopes generally less than 35 percent; re-using old skid trails to the greatest extent practicable; and limiting the ground-based yarding operations to the dry season. On harvester operations slash from the processing of trees was placed in front of the tracks to reduce soil compaction and displacement. Forwarders operated only on approved existing skid trails or on harvester trails covered with slash.

Harvest of portions of Units 5, 6, 7, 8 and 13 employed cut-to-length harvester/forwarder systems. The area cumulatively affected by main forwarder trails, landings and large slash piles ranged from five (5) to eight (8) percent for the individual harvest units. These figures are within the plan maintenance threshold of less than ten (10) percent of ground-based harvest areas being subjected to soil displacement and compaction.

Nine temporary roads totaling approximately 2.18 miles were built and an unsurfaced segment of Road No. 30-8-11.5 was renovated. Spurs 4 and 9 were blocked after completion of use, while the remaining spurs (Spurs 1-3, 5-8, and 10; and Road 30-7-18.3) were subsoiled, waterbarred and slash mulched. This work was completed by October 2011.

Conclusion:

Swiftwater Resource Area – ROD/RMP requirements were met

South River Resource Area – ROD/RMP requirements were met.

Monitoring Question 3:

Have the Best Management Practices related to site preparation using prescribed burning, as listed in the fiscal year 2001 Plan Maintenance, been implemented on prescribed burns conducted during fiscal year 2011? If prescribed burning took place on highly sensitive soils, was the prescription to minimize impacts on soil properties implemented successfully?

Monitoring Requirement:

All prescribed burning on highly sensitive soils carried out in the last fiscal year will be assessed.

Monitoring Performed:

Swiftwater Resource Area –N/A

South River Resource Area – N/A

Findings:

Program review showed that no prescribed burning for site preparation occurred on highly sensitive soils in fiscal year 2011

Conclusion:

ROD/RMP requirements were met.

Monitoring Question 4:

What is the status of closure, elimination or improvement of roads and is the overall road mileage within Key Watersheds being reduced?

Monitoring Requirement:

The Annual Program Summary will address Implementation Question 4.

Monitoring Performed:

Program review

Findings:

The following road definitions apply to Tables 24 and 25.

Definitions

Improve Drainage &/or Road Surfacing - Road improvements in which extra drainage structures are added and/or rock is added using BMPs in order to raise the road level to current ROD/RMP standards, effectively reduce sedimentation, and increase infiltration of intercepted flows.

Decommission - Existing road segment will be closed to vehicles on a long-term basis, but may be used again in the future. Prior to closure, the road will be prepared to avoid future maintenance needs; the road will be left in an “erosion-resistant” condition which may include establishing cross drains, and removing fills in stream channels and potentially unstable fill areas. Exposed soils will be treated to reduce sedimentation. The road will be closed with a device similar to an earthen barrier (tank trap) or equivalent.

Full Decommission - Existing road segments determined to have no future need may be subsoiled (or tilled), seeded, mulched, and planted to reestablish vegetation. Cross drains, fills in stream channels and potentially unstable fill areas may be removed to restore natural hydrologic flow. The road will be closed with a device similar to an earthen barrier (tank trap) or equivalent.

Conclusion:

ROD/RMP requirements to reduce overall road mileage within Key Watersheds were met.

Table 24. Swiftwater Resource Area Key Watershed Road Projects through Fiscal Year 2011

RMP Name ¹	Current Name	Permanent New Discretionary ² Road Construction (miles)	Decommissioning ³ of Roads (miles)	Balance (miles of decommissioned roads minus miles of new road construction)
Canton Creek ⁴	Canton Creek Watershed	0	13.31	13.31
Upper Smith River	Upper Smith River Watershed	0	9.14	9.14

Cumulative data reported for fiscal years 1996-2011 has been modified to exclude non-discretionary road construction and temporary road construction/decommissioning that was not the intent of management direction specific to Tier 1 Key Watersheds.

Based on these figures and calculations, the Canton Creek Tier 1 Key Watershed, has a road construction/decommission budget with 13.31 miles banked for potential future management. The Upper Smith River Tier 1 Key Watershed has a balance of 9.14 miles.

(Footnotes)

1 Since the publication of the NWFP and the subsequent RMP for the Roseburg District, watershed boundaries and naming conventions have changed. Tier 1 Key Watershed boundaries have been preserved as originally delineated. However, the hydrologic units (i.e. watersheds, subwatersheds, and drainages) contained within and their names have changed.

2 Whereas previous Annual Program Summaries included non-discretionary road construction, they have been eliminated here as per the direction of the RMP (p. 20, 74) which specifies that only discretionary road construction must be mitigated with an equal amount of decommissioning.

3 Whereas previous Annual Program Summaries separated "partial" and "full" road decommissioning, all forms of road decommissioning (BLM definition) are included here.

4 Whereas previous Annual Program Summaries included USFS completed projects within the watershed, they have been eliminated and only discretionary BLM road construction or decommissioning are included here.

Table 25. South River Key Watershed Completed Road Projects through Fiscal Year 2011

RMP Name ¹	Current Name	Permanent New Discretionary ² Road Construction (miles)	Decommissioning ³ of Roads (miles)	Balance
Middle Creek	Middle Creek Subwatershed			<i>0</i>
South Umpqua River	Dumont Creek–South Umpqua River Watershed		0.44 ('03 ⁴)	-5.49
South Umpqua River	Coffee Creek–South Umpqua River Subwatershed		0.08 ('03 ⁵) 0.13 ('04 ⁶) 0.42 ('10 ⁷)	
South Umpqua River	Corn Creek–South Umpqua River Subwatershed			
South Umpqua River	Days Creek Subwatershed	1.41 ('96-'01 ⁸)	4.42 ('96-'01 ⁹)	
South Umpqua River	Saint John Creek–South Umpqua River Subwatershed	0.71 ('10 ¹⁰)	0.15 ('02 ¹¹)	
South Umpqua River	Stouts Creek Subwatershed			
South Umpqua River	Shively Creek–South Umpqua River Subwatershed		1.73 ('02 ¹²) 0.24 ('09 ¹³)	

Cumulative data reported for fiscal years 1996-2001 has been modified to exclude non-discretionary road construction and temporary road construction / decommissioning which was not the intent of management direction specific to Tier 1 Key Watersheds.

Based on these figures and calculations, the Middle Creek Tier 1 Key “Watershed,” has a balanced road construction/decommission budget with zero miles banked for potential future management. The South Umpqua Tier 1 Key “Watershed” has a negative balance of 5.49 miles.

(Footnotes)

1 Since the publication of the NWFP and the subsequent RMP for the Roseburg District, watershed boundaries and naming conventions have changed. Tier 1 Key Watershed boundaries have been preserved as originally delineated. However, the hydrologic units (i.e. watersheds, subwatersheds and drainages) contained within and their names have changed.

2 Whereas previous Annual Program Summaries included non-discretionary road construction, they have been eliminated here as per the direction of the RMP (p. 20, 74) which specifies that only discretionary road construction must be mitigated with an equal amount of decommissioning.

3 Whereas previous Annual Program Summaries separated “partial” and “full” road decommissioning, all forms of road decommissioning (BLM definition) are included here.

4 Big Foot Density Management

5 Big Foot Density Management

6 Wasted Days Commercial Thinning

7 Tin Horn Commercial Thinning

8 High Noon Timber Sale

9 High Noon, Red Top I Salvage and Jobs in the Woods

10 Treetop Flyer Commercial Thinning

11 Bland Days Commercial Thinning

12 Slimewater Creek Density Management

13 Shively Whiplash Density Management

Wildlife Habitat

Expected Future Conditions and Outputs

Maintenance of biological diversity and ecosystem health to contribute to healthy wildlife populations.

Implementation Monitoring

Monitoring Question 1:

Are suitable (diameter and length) numbers of snags, coarse woody debris, and green trees being left, in a manner as called for in the SEIS Record of Decision Standards and Guidelines and ROD/RMP management direction?

Monitoring Requirement:

At least 20 percent of regeneration harvest timber sales completed in the fiscal year will be examined to determine snag and green tree numbers, heights, diameters, and distribution within harvest units. Snags and green trees left following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will also be examined to determine down log retention direction has been followed.

Monitoring Performed:

Program review.

Findings:

No regeneration harvest timber sales occurred during fiscal year 2011.

Conclusion:

ROD/RMP objectives are being met.

Monitoring Question 2:

Are special habitats being identified and protected?

Monitoring Requirement:

At least 20 percent of BLM actions, within each resource area, on lands including or near special habitats will be examined to determine whether special habitats were protected. Special habitats, as defined in the ROD/RMP, would include: ponds, bogs, springs, sumps, marshes, swamps, dunes, meadows, balds, cliffs, salt licks, and mineral springs.

Monitoring Performed:

Swiftwater Resource Area – Adams Apple Commercial Thinning
Darth Raider Commercial Thinning and Density Management
South River Resource Area – Olly Cat Density Management
Dagnet Commercial Thinning and Density Management

Findings:

Swiftwater Resource Area - The Elkhead Commercial Thinning & Density Management Environmental Assessment did not identify any special habitats in units comprising the Adams Apple Commercial Thinning project, based upon field reconnaissance. Surveys for target wildlife species were conducted and no requirements for special habitat protection were identified and documented in the Adams Apple Commercial Thinning Decision Document.

The Upper Umpqua Environmental Assessment did not identify any special habitats in units comprising the Darth Raider Commercial Thinning and Density Management project, based upon field reconnaissance. Surveys for target wildlife species were conducted and no requirements for special habitat protection were identified and documented in the Darth Raider Commercial Thinning and Density Management Decision Document.

South River Resource Area – The Olalla-Lookingglass LSR Density Management Environmental Assessment did not identify any special habitats in units comprising the Olly Cat Density Management project, based upon field reconnaissance. Surveys for target wildlife species were conducted and no requirements for special habitat protection were identified and documented in the Olly Cat Density Management Decision Document.

The Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment did not identify any special habitats in units comprising the Dagnet Commercial Thinning and Cat Density Management project, based upon field reconnaissance. Surveys for target wildlife species were conducted and no requirements for special habitat protection were identified and documented in the Dagnet Commercial Thinning and Density Management Decision Document.

Conclusions:

ROD/RMP requirements were met.

Fish Habitat

Expected Future Conditions and Outputs

See Aquatic Conservation Strategy Objectives.

Maintenance or enhancement of the fisheries potential of streams and other waters, consistent with BLM's Anadromous Fish Habitat Management on Public Lands guidance, BLM's Fish and Wildlife 2000 Plan, the Bring Back the Natives initiative, and other nationwide initiatives.

Rehabilitation and protection of at-risk fish stocks and their habitat.

Implementation Monitoring

Monitoring Question 1:

Have the project design criteria to reduce the adverse impacts to fish been implemented?

Monitoring Requirements:

At least 20 percent of the timber sales completed in fiscal year 2011 will be reviewed to ascertain whether the design criteria were carried out as planned.

Monitoring Performed:

Swiftwater Resource Area – Adams Apple Commercial Thinning
Darth Raider Commercial Thinning and Density Management
South River Resource Area – Olly Cat Density Management
Dagnet Commercial Thinning and Density Management

Findings:

Swiftwater Resource Area – Adams Apple Commercial Thinning

Fisheries-related best management practices and project design features identified as applicable in the Elkhead Commercial Thinning and Density Management Environmental Assessment were carried forward into the Adams Apple project design and contract stipulations.

As prescribed in the Elkhead Commercial Thinning and Density Management Environmental Assessment (p. 12), intermittent streams adjacent to thinning units were given a 20 to 50 foot minimum “no harvest” buffer. A 100 foot minimum “no-harvest” buffer was implemented on all fish-bearing streams (i.e. Adams Creek). As implemented, “no-harvest” buffers along intermittent streams varied in width based on specific site conditions including topography and slope stability and most buffers were 40 to 60 feet in width. Trees reserved in Riparian Reserves including within the “no-harvest” buffer were sufficient to provide short and long term sources of instream functional wood to stream channels and provide channel and stream bank stability. Stream bank stability and vegetation was retained by these buffers and an adequate filter strip was present to prevent overland transport of sediment from the harvest unit.

The Elkhead Commercial Thinning and Density Management Environmental Assessment (p. 12) specified that variable-width “no-harvest” buffers would be established to protect stream bank integrity, maintain streamside shade, and provide a filtering strip for overland run-off. These buffers would be a minimum slope distance of 20 feet wide on intermittent non-fish-bearing streams and 100 feet wide on fish-bearing streams, measured from the top of the stream bank. Determination of the final width of intermittent stream buffers would be based on factors, such as unique habitat features, streamside topography, and vegetation. Trees would be felled away from these “no-harvest” buffers.

No ground-based equipment operations would be allowed within the “no-harvest” buffers. If it is necessary to fell trees within the “no harvest” buffers for operational purposes, the felled trees would be left in place to provide instream wood and protection for stream banks. The need for cable yarding corridors across streams

would be clearly demonstrated by the purchaser. These would be a maximum of 20 feet wide and laid out perpendicular to stream channels at locations and in a manner approved by the contract administrator.

As stated in the EA (pg. 9), the 23-4-19.0, 23-4-19.1, and 23-4-19.2 roads (3.25 miles) were renovated to enable access for thinning operations in Adams Apple and then decommissioned afterwards. These roads, including the 23-4-19.1 road, were decommissioned by removing cross-drains/culverts, water-barring, mulching with logging slash where available (or with straw if logging slash is not available), and blocking with trench barriers.

Swiftwater Resource Area – Darth Raider Commercial Thinning and Density Management

Fisheries-related best management practices and project design features identified as applicable in the Upper Umpqua Watershed Plan Environmental Assessment were carried forward into the Darth Raider Commercial Thinning and Density Management project design and contract stipulations.

As prescribed in the Upper Umpqua Watershed Plan Environmental Assessment (p. 5-6), intermittent streams adjacent to thinning units were given a 20 to 50 foot minimum “no harvest” buffer. There were no fish-bearing streams within the Darth Raider units, had there been they would have had a 100 foot minimum “no-harvest” buffer. As implemented, “no-harvest” buffers along intermittent streams varied in width based on specific site conditions including topography and slope stability, most buffers were 40 to 60 feet in width. Trees reserved in Riparian Reserves including within the “no-harvest” buffer were sufficient to provide short and long term sources of instream functional wood to stream channels and provide channel and stream bank stability. Stream bank stability and vegetation was retained by these buffers and an adequate filter strip was present to prevent overland transport of sediment from the harvest unit.

The Upper Umpqua Watershed Plan Environmental Assessment (p. 12) specified that variable-width “no-harvest” buffers would be established to protect stream bank integrity, maintain streamside shade, and provide a filtering strip for overland run-off. These buffers would be a minimum slope distance of 20 feet wide on intermittent non-fish-bearing streams and 100 feet wide on fish-bearing streams, measured from the top of the stream bank. Determination of the final width of intermittent stream buffers would be based on factors, such as unique habitat features, streamside topography, and vegetation. Trees would be felled away from these “no-harvest” buffers.

No ground-based equipment operations would be allowed within the “no-harvest” buffers. If it is necessary to fell trees within the “no harvest” buffers for operational purposes, the felled trees would be left in place to provide instream wood and protection for stream banks. The need for cable yarding corridors across streams would be clearly demonstrated by the purchaser. These would be a maximum of 20 feet wide and laid out perpendicular to stream channels at locations and in a manner approved by the contract administrator.

South River Resource Area – Olly Cat Density Management

Fisheries-related best management practices and project design features identified as applicable in the Olalla-Lookingglass LSR Density Management Environmental Assessment were carried forward into the Olly Cat Density Management project design and contract stipulations.

As prescribed in the Olalla-Lookingglass LSR Density Management Environmental Assessment (p. 6), streams adjacent to thinning units were given a 20 foot minimum “no harvest” buffer and a 50 foot minimum “no-harvest” buffer on all fish-bearing streams. As implemented, “no-harvest” buffers along fish bearing streams

varied in width based on specific site conditions including topography and slope stability and exceeded the 50 foot minimums. Trees reserved in Riparian Reserves including within the “no-harvest” buffer were sufficient to provide short and long term sources of instream functional wood to stream channels and provide channel and stream bank stability. Stream bank stability and vegetation was retained by these buffers and an adequate filter strip was present to prevent overland transport of sediment from the harvest unit.

The Olalla-Lookingglass LSR Density Management Environmental Assessment (p. 6) specified that variable-width “no-harvest” buffers would be established to protect stream bank integrity, maintain streamside shade, and provide a filtering strip for overland run-off. These buffers would be a minimum slope distance of 20 feet wide on intermittent non-fish-bearing streams and 50 feet wide on fish-bearing streams, measured from the top of the stream bank. Determination of the final width would be based on factors, such as unique habitat features, streamside topography, and vegetation. Whether a stream is intermittent or perennial, fish-bearing, its susceptibility to solar heating, and proximity to Essential Fish Habitat would also be considered in determining specific buffer widths. Trees would be felled away from these “no-harvest” buffers.

No ground-based equipment operations would be allowed within the “no-harvest” buffers. If it is necessary to fell trees within the “no harvest” buffers for operational purposes, the felled trees would be left in place to provide instream wood and protection for stream banks. The need for cable yarding corridors across streams would be clearly demonstrated by the purchaser. These would be a maximum of 20 feet wide and laid out perpendicular to stream channels at locations and in a manner approved by the contract administrator.

Timber hauling from locations on Units 2, 4-10, 11 and 13 accessed by unsurfaced roads was restricted to the dry season when the absence of precipitation eliminated any mechanism for sediment transport to streams. A segment of Road No. 30-7-6.2 was improved by surfacing with aggregate to accommodate wet weather operations on Unit 1. Haul route renovation and maintenance assured that road related sediments were controlled and did not result in stream sedimentation.

South River Resource Area – Dragnet Commercial Thinning and Density Management

Fisheries-related best management practices and project design features identified as applicable in the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment Environmental Assessment were carried forward into the Dragnet Commercial Thinning and Density Management project design and contract stipulations.

As prescribed in the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment Environmental Assessment (p. 4) minimum “no-harvest” buffers were established on all stream channels. For units in the Drag Net sale, there were only two intermittent, non-fish bearing stream that were adjacent to sale units. The applied buffers on these streams exceeded the 20 feet (slope distance measured from the top of the stream bank) minimum for non-fish bearing streams and in most cases were about 50 feet. These buffers provided appropriate protection for stream bank integrity, maintain streamside shade, and provided adequate filtering strip for any potential overland run-off. Trees remaining in the Riparian Reserves including inside the “no-harvest” buffer were sufficient to provide short and long term supplies of instream functional wood to help maintain channel stability. No yarding corridors were needed to yard trees to landing and therefore there were no trees felled within the “no-harvest” buffers to create corridors.

No ground-based equipment operations would be allowed within the “no-harvest” buffers. If it is necessary to fell trees within the “no harvest” buffers for operational purposes, the felled trees would be left in place to provide instream wood and protection for stream banks.

Timber hauling from locations on Units 1, 3 and 4 accessed by unsurfaced roads was restricted to the dry season when the absence of precipitation eliminated any mechanism for sediment transport to streams. Haul route renovation and maintenance assured that road related sediments were controlled and did not result in stream sedimentation.

Conclusions:

ROD/RMP requirements were met.

Special Status Species Habitat

Expected Future Conditions and Outputs

Protection, management, and conservation of Federally-listed and proposed species and their habitats, to achieve their recovery in compliance with the Endangered Species Act and Bureau Special Status Species policies.

Conservation of Federal candidate and Bureau Sensitive species and their habitats so as not to contribute to the need to list and recover the species.

Conservation of state listed species and their habitats to assist the state in achieving management objectives.

Maintenance or restoration of community structure, species composition, and ecological processes of special status plant and animal habitat.

Protection of Bureau Strategic Species and SEIS Special Attention Species so as not to elevate their status to any higher level of concern.

Implementation Monitoring

Monitoring Question 1:

Do management actions comply with ROD/RMP management direction regarding Special Status Species?

Monitoring Requirement:

At least 20 percent of timber sales which were completed in fiscal year 2011 and other relevant actions will be reviewed on the ground after completion to ascertain whether the required mitigation was carried out as planned.

Monitoring Performed:

Swiftwater Resource Area – Adams Apple Commercial Thinning
Darth Raider Commercial Thinning and Density Management
South River Resource Area – Olly Cat Density Management
Dagnet Commercial Thinning and Density Management

Findings:

Swiftwater Resource Area – The Adams Apple Commercial Thinning project was analyzed for potential impacts on Federally-listed Threatened and Endangered, and Bureau Sensitive and Assessment species at the time the Elkhead Commercial Thinning and Density Management Environmental Assessment was completed in 2008. Impacts to the *Federally threatened* species from noise disturbance associated with thinning were evaluated using local information and following guidelines for the Endangered Species Act of 1973 (as amended) as stated in the FY 2005-2008 Programmatic Letter of Concurrence (Log No. 1-15-05-F-0511; June 24, 2005).

Wildlife

Northern spotted owl (Strix occidentalis caurina): There is one known northern spotted owl site located within 1.2 miles (Cascades provincial home range) of the thinning units. Seasonal restrictions during the critical breeding season (March 1st through July 15th) would have been required if an activity center was located within 65 yards of the harvest activities or within 0.25 mile during helicopter use. However, seasonal restrictions were not required to mitigate for disturbance to northern spotted owls during the critical breeding seasonal since there were no known northern spotted owl nest sites, known activity centers, or unsurveyed suitable habitat within 0.25 miles of the harvest units or helicopter landings.

The forest stands within the Adams Apple Commercial Thinning project area were not considered suitable nesting habitat for the northern spotted owl due to the lack of large diameter trees and snags within the stand. The project area was considered dispersal-only habitat for the spotted owl because trees within the stand were of relatively small diameters (14.4 inches quadratic mean diameter) and a young age (47 years), providing roosting and foraging opportunities for the northern spotted owl. Treatment of 296 acres of mid-seral forest stands are expected to improve the quality of the dispersal habitat by enhancing the development of shrub and understory layers for prey species and thus, improving forage opportunities for the spotted owl. Dispersal habitat was modified by reducing canopy cover from 100 percent to 59 percent stand-average canopy cover, thus not reducing the stands' capacity to function as dispersal habitat because the canopy cover was maintained above a 40 percent (stand average) threshold (Thomas *et al.* 1990). Within the Riparian Reserves, long term thinning effects are expected to accelerate the development of late-successional characteristics (i.e. multiple canopy layers, large trees, large snags and down wood) associated with suitable habitat for the northern spotted owl. Because the functionality of the dispersal habitat was maintained post-harvest and disturbance mitigations were implemented, the thinning treatment was determined to *not likely to adversely affect* the northern spotted owl.

In the FY2005-2008 Programmatic Letter of Concurrence (Log No. 1-15-05-F-0511;), dated June 24, 2005, the USFWS concurred that projects of this nature are “*not likely to adversely affect*” the northern spotted owl.

Critical Habitat is a specific geographical area designated by the US Fish and Wildlife Service as containing habitat essential for the conservation of a Threatened and Endangered species. This project did not occur within Critical Habitat designated for the northern spotted owl. Therefore, there was no concern for Critical Habitat for the northern spotted owl.

Marbled Murrelet (Brachyramphus marmoratus): The Adams Apple Commercial Thinning project area is located outside of the distribution range of the marbled murrelet.

Bureau Sensitive Species: The Adams Apple Commercial Thinning units were evaluated to determine the presence of suitable habitat and effects to Bureau Sensitive Species, including the fisher (*Martes pennanti*), purple martin (*Progne subis*), fringed myotis (*Myotis thysanodes*) and Townsend's big-eared bat (*Corynorhinus townsendii*).

The project occurs within the historical distribution range for the fisher. However, fisher populations in Oregon are currently known to exist only in the southern portion of the Cascade Range and Klamath Mountains (Lofroth *et al*, 2020), and therefore are not expected to occur within the project area. However, if fishers expand into their historical range, they would be expected to use the stands within the project area for dispersal. Within the Riparian Reserves, reducing stand densities within the homogenous stands are expected to improve the quality of dispersal habitat for the fisher by creating habitat conditions favorable for the development of a multi-canopy understory and larger trees. Additionally, project design features to retain snags and coarse woody debris would maintain habitat for potential prey species (i.e. small mammals) that use these habitat features.

The Adams Apple project area does not contain snags located in open areas typical of purple martin colonies and the closest known purple martin colony is located 5.2 miles from the project area. However, because they are known to travel long distances during foraging activities, purple martins would be expected to forage above the canopies within the project area. Project design criteria maintained snags, but the thinning treatment did not create optimal habitat conditions for colonization of snags by purple martins. Unless windthrow or other catastrophic events occur that would create large openings around existing snags, the habitat conditions around those snags within the project units would remain unsuitable for purple martins.

It was unknown how many (if any) suitable bat roost trees were actually occupied by fringed myotis and/or Townsend's big-eared bat. Project design criteria to maintain snags and residual tree components minimized habitat effects to the Townsend's big-eared and fringed myotis bat species. Removal of canopy around existing snags were expected to modify micro habitat conditions around suitable snag habitat, exposing the habitat features to increased thermal and weather exposure. Micro-site conditions are expected to recover as canopy cover and stand structure develops around suitable habitat features. Additionally, green trees retained as part of the density management prescription would serve as future recruitment for bat habitat as the trees develop late-successional characteristics.

Botany

Swiftwater Resource Area - Surveys of the Adam's Apple Commercial Thinning project area for Special Status Plants were performed prior to project implementation. No Special Status Plants were observed in the project area during field surveys.

Swiftwater Resource Area – The Darth Raider Commercial Thinning and Density Management project was analyzed for potential impacts on Federally-listed Threatened and Endangered, and Bureau Sensitive and Assessment species at the time the Upper Umpqua Environmental Assessment was completed in 2005.

Wildlife

Northern spotted owl (Strix occidentalis caurina): There are four known northern spotted owl sites (including nine activity centers) located within 1.5 miles (Coast Range provincial home range) of the thinning units. Seasonal restrictions during the critical breeding season (March 1st through July 15th) would have been required if an activity center was located within 65 yards of the harvest activities. However, seasonal restrictions were not required to mitigate for disturbance to northern spotted owls during the critical breeding seasonal since there were no known northern spotted owl nest sites, known activity centers, or unsurveyed suitable habitat within 65 yards of the harvest units.

The forest stands within the Darth Raider Commercial Thinning and Density Management project area were not considered suitable nesting habitat for the northern spotted owl due to the lack of large diameter trees and snags within the stand. The project area was considered dispersal-only habitat for the northern spotted owl because

trees within the stand were of relatively small diameters (12.5 inches quadratic mean diameter) and a young age (39-66 years), providing roosting and foraging opportunities for the northern spotted owl. Variable density treatment of 181 acres of mid-seral forest stands is expected to improve the quality of the dispersal habitat by enhancing the development of shrub and understory layers for prey species and thus, improving forage opportunities for the northern spotted owl. Dispersal habitat was modified by reducing canopy cover, however because the canopy cover was maintained above the 40 percent (stand average) threshold (Thomas *et al.* 1990), the stands' capacity to function as dispersal habitat was maintained. Within the Late Successional Reserve and Riparian Reserves, the long term effects of the thinning treatment is expected to accelerate the development of late-successional characteristics (i.e. multiple canopy layers, large trees, large snags and down wood) associated with suitable habitat for the northern spotted owl. Because the functionality of the dispersal habitat was maintained post-harvest and disturbance mitigations were implemented, the thinning treatment was determined to *not likely to adversely affect* the northern spotted owl.

At the time the Darth Raider Commercial Thinning and Density Management Decision Document was signed, the 126 acres of the thinning project occurred within Critical Habitat (CHU OR-58) designated for the northern spotted owl in 1992. In 2008, the Critical Habitat for the northern spotted owl was redesignated, placing the project within Critical Habitat Unit OR-8. It was determined the treatment of 126 acres (0.06 percent of 212,740 acres within CHU OR-8) may affect Critical Habitat due to loss of primary constituent elements (i.e. canopy cover). Although, the thinning treatment temporarily degraded 126 acres, the functionality of the Critical Habitat Unit was maintained as the stand continues to provide sufficient primary constituent elements for northern spotted owl dispersal because residual trees were retained and canopy cover was maintained above 40 percent. The treatment is expected to improve the functionality of the Critical Habitat Unit in the long term, by enhancing the development of multiple canopy layers, large trees and snags, and down wood.

In the FY2005-2008 Programmatic Letter of Concurrence (Log No. 1-15-05-F-0511;), dated June 24, 2005, the USFWS concurred that projects of this nature are "*not likely to adversely affect*" the northern spotted owl.

Marbled Murrelet (Brachyramphus marmoratus): The Darth Raider Commercial Thinning and Density Management project was located approximately 33-34 miles from the coast, within the Marbled Murrelet Inland Management Zone 1 (within 0-35 miles of the coast). There were no known occupied sites within 100 yards of the units. However, there was unsurveyed suitable habitat within 100 yards of Units 1, 2, 3, 4, 5, 7, and 8. Therefore, seasonal restrictions were implemented within 100 yards of suitable marbled murrelet habitat from April 1st thru August 5th and daily operating restrictions from August 6th thru September 15th, both days inclusive.

Within the stands prescribed for thinning and density management, surveys for trees with suitable platform structures were completed following the Residual Habitat Guidelines. As a result of the those surveys, 46 trees were detected that met the criteria as potential marbled murrelet nest trees. The unit boundaries were reconfigured, excluding 45 of the 46 platform trees identified during surveys from harvest units. The remaining platform tree was located within Unit 1. Interlocking canopies within at least half-site potential tree height of the platform tree was maintained to retain local conditions around the suitable platform structures.

The variable density thinning treatment is expected to accelerate the development of trees with large limbs and crowns to provide future nesting opportunities for marbled murrelets.

Of the 181 acres of thinning, 126 acres occurred in designated Critical Habitat (CHU OR-4-e) for the marbled murrelet. Thinning treatment modified 126 acres of recruitment habitat (i.e. habitat currently unsuitable, but

capable of becoming suitable in the future [Fed. Register 61:26256-26320]). Density management is expected to facilitate the development of future nesting habitat by increasing tree and limb growth rates; fostering the development of nesting platforms. Thinning activities within Critical Habitat are intended to improve forest health conditions or facilitate the development of structural characteristics of unsuitable habitat. This action was consistent with recovery actions described in the Marbled Murrelet Recovery Plan (recovery action 3.2.1.3).

In the FY2005-2008 Programmatic Letter of Concurrence (Log No. 1-15-05-F-0511;), dated June 24, 2005, the USFWS concurred that projects of this nature are “*not likely to adversely affect*” the marbled murrelet.

Bureau Sensitive Species: The Darth Raider Commercial Thinning and Density Management units were evaluated to determine the presence of suitable habitat and effects to Bureau Sensitive Species, including the bald eagle (*Haliaeetus leucocephalus*), American peregrine falcon (*Falco peregrinus anatum*), fisher (*Martes pennanti*), northwestern pond turtle (*Actinemys marmorata marmorata*), purple martin (*Progne subis*), spotted tail-dropper (*Prophyaon vanattaie paradalis*), white-tailed kite (*Elanus leucurus*), fringed myotis (*Myotis thysanodes*) and Townsend’s big-eared bat (*Corynorhinus townsendii*).

At the completion of the Upper Umpqua Environmental Assessment in 2005, the bald eagle was a *Federally threatened* species. The bald eagle was delisted by the USFWS in 2007, and is now considered a *Bureau Sensitive* species. There is one known bald eagle nest site within 1.5 miles of the Darth Raider Commercial Thinning and Density Management. Because the nest site was located more than one mile from the project area, there were no disturbance or habitat concerns for the bald eagle.

Harvest units did not contain suitable nesting habitat (e.g. cliffs or rock outcrops) for the peregrine falcon. There are four known peregrine falcon sites and at least one suspected territory within the Upper Umpqua Fifth-Field Watershed. Thus, based on the distribution of known peregrine falcon sites within the watershed, peregrines are expected to hunt within the project area. Thinning was not expected to cause measurable effects to foraging habitat.

The project occurs within the historical distribution range for the fisher. However, fisher populations in Oregon are currently known to exist only in the southern portion of the Cascade Range and Klamath Mountains (Lofroth *et al*, 2020), and therefore are not expected to occur within the project area. The nearest recorded fisher observation occurred in the year 2000 approximately 11.7 miles to the southwest of the project area (ONHP 2011). Thus, the fisher would be expected to use the stands within the project area for dispersal. Within the Late-Successional Reserves and Riparian Reserves, reducing stand densities within the homogenous stands are expected to improve the quality of dispersal habitat for the fisher by creating habitat conditions favorable for the development of a multi-canopy understory and larger trees. Additionally, project design features to retain snags and coarse woody debris would maintain habitat for potential prey species (i.e. small mammals) that use these habitat features.

Suitable habitat for the northwestern pond turtle may be present in a pump chance located on private land, in the SE¼ of T24S-R07W-Section 19. The nearest pond turtle observation recorded was located approximately 800 meters (0.5 miles) south of the project area and therefore, may overwinter in the upland habitat. The thinning project did not affect upland overwintering habitat in a measurable way.

The Darth Raider Commercial Thinning and Density Management project area does not contain snags located in open areas typical of purple martin colonies and there are no known colony sites within the Upper Umpqua

Fifth-field Watershed. However, they have been documented foraging within the watershed and because they are known to travel long distances during foraging activities, purple martins would be expected to forage above the canopies within the project area. Project design criteria maintained snags, but the thinning treatment did not create optimal habitat conditions for colonization of snags by purple martins. Unless windthrow or other catastrophic events occur that would create large openings around existing snags, the habitat conditions around those snags within the project units would remain unsuitable for purple martins.

The harvest units contained habitat suitable for the spotted tail-dropper (e.g. moist coniferous forest with a substantial hardwood component), but there were no known sites within the project area. Hardwoods and down woody debris were maintained, thus no measurable impact to the spotted tail-dropper would occur since the post-treatment stand condition falls within the range of suitability for this species and its con-specifics.

The harvest units do not contain and are not adjacent to suitable habitat (e.g. open grasslands, meadows, farmlands, etc.) for the white-tailed kite. Kites have been documented within the Upper Umpqua Fifth-field Watershed and suitable habitat is located approximately 800 meters from the proposed project area. The thinning did not affect foraging habitat for the species.

It was unknown how many (if any) suitable bat roost trees were actually occupied by fringed myotis and/or Townsend's big-eared bat. Project design criteria to maintain snags and residual tree components minimized habitat effects to the Townsend's big-eared and fringed myotis bat species. Removal of canopy around existing snags were expected to modify micro habitat conditions around suitable snag habitat, exposing the habitat features to increased thermal and weather exposure. Micro-site conditions are expected to recover as canopy cover and stand structure develops around suitable habitat features. Additionally, green trees retained as part of the density management prescription would serve as future recruitment for bat habitat as the trees develop late-successional characteristics.

Botany

Swiftwater Resource Area- Surveys for Special Status Plants in the DarthRaider Commercial Thinning and Density Management project area were performed prior to project implementation. No Special Status Plants were observed in the Project Area during field surveys.

South River Resource Area – A review of the Olalla-Lookingglass LSR Density Management Environmental Assessment, of which Olly Cat Density Management was a component, showed that a number of Special Status Species were evaluated in the analysis.

Wildlife

The Olly Cat Density Management project was analyzed for potential impacts on Federally-listed Threatened and Endangered, Bureau Sensitive and Assessment species at the time the Olalla-Lookingglass LSR Density Management Environmental Assessment was completed in 2007. The project was exempt from Survey & Manage under Pechman exemption "a".

The Olly Cat Density Management project thinned 391 acres considered dispersal-only habitat for the northern spotted owl because of the relatively small diameters (10.4 to 13.4 inches quadratic mean diameter) and young age (42 to 61 years). Thinning changes the physical attributes of dispersal habitat in the short-term but the post harvest canopy closure levels of 40 percent or greater allow the forest stands to continue to function as dispersal habitat.

Thinning was considered a "may affect" not likely to adversely affect the northern spotted owl because none of the thinning treatments caused canopy closure of the forest stands to fall below the 40 percent threshold

accepted for dispersal habitat function. In the FY 2005-2008 Programmatic Letter of Concurrence (Log No. 1-15-05-F-0511; June 24, 2005), the USFWS concurred that commercial management treatments would not adversely affect the northern spotted owl.

Impacts to northern spotted owl from noise disturbance associated with thinning were evaluated using local information and following guidelines for the Endangered Species Act of 1973 (as amended) as stated in the FY 2005-2008 Programmatic Letter of Concurrence (Log No. 1-15-05-F-0511; June 24, 2005).

Because of the presence of unsurveyed, suitable nesting habitat for the northern spotted owl in proximity to portions of Units 11 and 12, within disruption thresholds, seasonal restrictions were implemented prohibiting operations from March 1 to June 30, both dates inclusive, unless surveys determined that birds were not present, had not attempted to nest, or had failed to produce young. The units contain only disturbance habitat, therefore, there were no restrictions from July 1 through February 29. Surveys of suitable habitat in proximity to the units were conducted in 2008, 2009 and 2010 and determined that northern spotted owls were not present.

As described in the Olalla-Lookingglass LSR Density Management Environmental Assessment EA (p. 21), suitable marbled murrelet nesting habitat was present in proximity to several of the Olly Cat units. Two years of protocol surveys were conducted without any detection of occupancy. One unit was marked under the guidance of a wildlife biologist so that suitable nest trees and habitat functionality would be maintained. Daily operating restrictions were implemented on portions of Units 11 and 12, and for construction of Spur 8 so that no disturbance to marbled murrelets that could potentially be nesting would occur.

Protocol surveys were conducted for the Chace sideband (*Monadenia chaceana*), green sideband (*Monadenia fidelis beryllica*), and Oregon shoulderband (*Helminthoglypta hertleini*) snails. The results of the surveys were negative and no effects to any of these species was expected.

Botany

Surveys for Special Status Plants were performed prior to project implementation. No Special Status species were located.

South River Resource Area – A review of the Lower Cow Creek 2007 Commercial Thinning and Density Management, of which the Dagnet Commercial Thinning and Density Management project is a component, identified a number of Special Status Species to be evaluated.

Wildlife

The Dagnet Commercial Thinning and Density Management project was analyzed for potential impacts on Federally-listed Threatened and Endangered, and Bureau Sensitive and Assessment species at the time the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental Assessment was completed in 2008. The project was exempt from Survey & Manage under Pechman exemption “a because it thinned forest stands under 80 years of age.

The Dagnet Commercial Thinning and Density Management project thinned 133 acres of forest relatively small diameter (9.2 to 12.3 inches quadratic mean diameter) trees and young age (38 to 53 years). As described in the EA (p. 19) and discussed in the Dagnet Commercial Thinning and Density Management Decision Document (10/17/2008; p. 2), the commercial thinning and density management units were considered solely dispersal habitat for the northern spotted because of the small diameter, young age, and general lack of suitable habitat components usually associated with the suitable nesting habitat for the northern spotted owl.

Thinning changed the vertical and horizontal cover in the stands, and the spacing between trees which in turn changed the canopy closure of dispersal habitat in the short-term. The post-harvest canopy closure levels were estimated in the environmental assessment to range from 43 to 74 percent with average tree diameters of 11 inches or greater that would continue to function as dispersal habitat for the northern spotted owl.

A field review (November 29, 2011) and estimate of canopy closure of the stands showed that the post-harvest canopy closures are above 40 percent, the generally accepted threshold for dispersal habitat function, in the units with the larger quadratic mean diameters. Although canopy closure of the forest stands did change, the forest stands are expected to provide roosting and foraging opportunities and continue to function as dispersal habitat for the northern spotted owl immediately after harvest. Dispersal habitat quality will increase as trees grow and canopy cover and closure increases through time. The units are located outside of the 0.5 mile radius core area of any known owl site and treatment will not limit access to suitable habitat elsewhere in the home ranges.

Unit 5 is located in spotted owl Critical Habitat Unit OR-62. Analysis determined that habitat availability and connectivity would be maintained and that density management would not adversely affect the Critical Habitat Unit (OR-62). On June 9, 2009 the USFWS (USDI USFWS RoseburgBLM-FY2009-10-Projects_TAILS 13420-2009-I-0109) concurred with the Roseburg BLM District's determination that density management would not adversely affect the Critical Habitat Unit (OR-62) and the Dagnet Commercial Thinning and Density Management would not adversely affect the northern spotted owl.

As discussed in the Decision Document (10/17/2008; p. 2), the six units comprising the timber sale were evaluated for the presence of suitable habitat for Oregon shoulderband snails (*Helminthoglypta hertleini*) and Chace sideband snails (*Monadenia chaceana*). Suitable habitat present in Units 3, 4 and 5 was surveyed according to established protocol standards, but neither target species was located.

Botany

Surveys for Special Status Plants were performed prior to project implementation. No Special Status species were located.

Conclusions:

ROD/RMP requirements were met.

Cultural Resources

Expected Future Conditions and Outputs

Identification of cultural resource localities for public, scientific, and cultural heritage purposes.

Conservation and protection of cultural resource values for future generations.

Provision of information on long-term environmental change and past interactions between humans and the environment.

Fulfillment of responsibilities to appropriate American Indian groups regarding heritage and religious concerns.

Implementation Monitoring

Monitoring Question 1:

During forest management and other actions that may disturb cultural resources, are steps taken to adequately mitigate disturbances?

Monitoring Requirements

At least 20 percent of the timber sales and other relevant actions (e.g., rights-of-way, instream structures) completed in fiscal year 2011 will be reviewed to evaluate documentation regarding cultural resources and American Indian values and decisions in light of requirements, policy and SEIS Record of Decision Standards and Guidelines and ROD/RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

Monitoring Performed

Swiftwater Resource Area – Adams Apple Commercial Thinning
Darth Raider Commercial Thinning and Density Management

South River Resource Area – Olly Cat Density Management
Dagnet Commercial Thinning and Density Management

Findings:

Swiftwater Resource Area - Darth Raider Thinning and Density Management

A project tracking form (CRS No. SW0706) under the Oregon BLM/State Historic Preservation Office (SHPO) cultural resource protocol was completed. It documents that field exams, site file reviews and inventory record reviews were conducted and approved by the District Cultural Resource Specialist and Field Manager. No cultural resources were found in the project area during the pedestrian inventory. In consultation with the State Historic Preservation Office the project was found to have “no effect” on cultural resources. The project was approved to proceed with no follow-up monitoring required.

Swiftwater Resource Area – Adams Apple Commercial Thinning

A project tracking form (CRS No. SW0712) under the Oregon BLM/State Historic Preservation Office (SHPO) cultural resource protocol was completed. It documents that field exams, site file reviews and inventory record reviews were conducted and approved by the District Cultural Resource Specialist and Field Manager. No cultural resources were found in the project area during the pedestrian inventory. In consultation with the State Historic Preservation Office the project was found to have “no effect” on cultural resources. The project was approved to proceed with no follow-up monitoring required.

South River Resource Area – Olly Cat Density Management

A project tracking form (CRS. No. SR0709) under the Oregon BLM/SHPO cultural resource protocol was completed. It documents that field exams, site file reviews and inventory record reviews were conducted and

approved by the Cultural Resource Specialist and Field Manager. Cultural resources were identified at two sites. Unit boundaries were reconfigured to avoid one of the sites. The second site was not located within proposed unit boundaries, but was close enough that unrestrained ancillary harvest activities might have an effect on it. A statement was placed in the contract administrator's notes to alert him of the situation ensuring the site will be avoided. This also applies to the first site. In a letter dated January 18, 2008, SHPO concurred that the project will have no effect on any known resources.

South River Resource Area – Dragnet Commercial Thinning and Density Management

A project tracking form (CRS. No. SR0807) under the Oregon BLM/SHPO cultural resource protocol was completed. It documents that field exams, site file reviews and inventory record reviews were conducted and approved by the Cultural Resource Specialist and Field Manager.

Pedestrian transects did not identify any prehistoric or historic sites within any of the proposed units.

Conclusion:

ROD/RMP requirements were met.

Visual Resources

Implementation Monitoring

Monitoring Question 1:

Are visual resource design features and mitigation methods being followed during timber sales and other substantial actions in Class II and III areas?

Monitoring Requirements

Twenty percent of the files for timber sales and other substantial projects in Visual Resource Management (VRM) Class II or III areas completed in the fiscal year will be reviewed to ascertain whether relevant design features or mitigating measures were included.

Monitoring Performed

Program review of all fiscal year 2011 actions accounted for 100 percent analysis.

Findings:

In the Swiftwater and South River Resource Areas, no timber sales occurred within Class II or Class III areas.

Conclusion:

ROD/RMP requirements were met.

Rural Interface Areas

Expected Future Conditions and Outputs

Consideration of the interests of adjacent and nearby rural land owners, including residents, during analysis, planning, and monitoring related to managed rural interface areas. (These interests include personal health and safety, improvements to property and quality of life.)

Determination of how land owners might be or are affected by activities on BLM-administered land.

Implementation Monitoring

Monitoring Question 1:

Are design features and mitigation measures developed and implemented to avoid/minimize impacts to health, life and property and quality of life and to minimize the possibility of conflicts between private and Federal land management?

Monitoring Requirements

At least 20 percent of all actions within the identified rural interface areas will be examined to determine if special project design features and mitigation measures were included and implemented as planned.

Monitoring Performed:

All fiscal year 2011 projects

Findings:

Swiftwater Resource Area - In the Swiftwater Resource Area, none of the timber sales terminated in FY2011 were within the identified rural interface areas.

South River Resource Area – None of the units constituting the Olly Cat Density Management project were identified as being located within the Wildland Urban Interface.

None of the proposed units analyzed in the Lower Cow Creek 2007 Commercial Thinning and Density Management Environmental assessment were within the wildland urban interface described in the Roseburg Fire Management Plan.

Conclusions:

ROD/RMP objectives were met.

Recreation

Implementation Monitoring

Monitoring Question 1:

What is the status of the development and implementation of recreation plans?

Monitoring Requirements

The Annual Program Summary will address implementation question 1.

Monitoring Performed:

Program review of all established recreation sites

Findings:

In 2011, all established recreation sites were evaluated for safety and customer use. Hazard abatement measures were initiated as required, i.e. hazard trees pruned or cut. Potable and irrigation water system issues surfaced at Cavitt Creek Falls, Millpond, Susan Creek, Tyee, and Eagleview Campgrounds. At some, water was tainted. Pipe and wells were replaced and re-drilled. At Millpond, a valid state water permit was found to be delinquent and the irrigation system for the large day-use area ballfield and area around the pavilion was shut down. Backlogged maintenance was documented and alternate sources for water should be sought for Millpond.

Cooperative efforts continued with the public and with local county, state and Federal agencies.

The host program continued to provide customer service and minor site maintenance at eight campgrounds. The Maintenance staff completed work outlined in the Maintenance Operation Plan (MOP). Youth groups and additional summer temporary staff helped complete actions in the MOP and most items were accomplished.

Guidelines in the North Umpqua Recreation Area Management Plan (2003) were followed. The District Maintenance Operating Plan was updated. The Recreation Business Plan for fee sites (2007) was followed in 2011. Two summer temps were hired to patrol the Wild & Scenic River corridor and assist in other recreation duties, including host coordination, small projects, and supervision of a several youth worked in maintaining and upgrading recreation sites.

Off-Highway Vehicle (OHV) issues were raised by staff and private landowners representing timber companies and environmental oriented landowners.

Conclusion:

ROD/RMP requirements were met in all categories of Recreation, with the exception of OHV designations and OHV management planning. A change is needed within the Limited class designation to avoid future trail and road proliferation and to protect natural resources. .

Comment/Discussion:

Additional recreation statistics are contained in the 2011 Recreation Management Information System (RMIS) database.

A District interdisciplinary team developed “OHV Management Issues & Recommendations for the Roseburg District Management Team”.

Special Areas

Expected Future Conditions and Outputs

Maintenance, protection, and/or restoration of the relevant and important values of the special areas which include: Areas of Critical Environmental Concern, Outstanding Natural Areas, Research Natural Areas, and Environmental Education Areas.

Provision of recreation uses and environmental education in Outstanding Natural Areas. Management of uses to prevent damage to those values that make the area outstanding.

Preservation, protection, or restoration of native species composition and ecological processes of biological communities in Research Natural Areas.

Provision and maintenance of environmental education opportunities to Environmental Education Areas. Management of uses to minimize disturbances of educational values.

Retention of existing Research Natural Areas and existing areas of Critical Environmental Concern that meet the test for continued designation. Retention of other special areas. Provision of new special areas where needed to maintain or protect important values.

Implementation Monitoring

Monitoring Question 1:

Are BLM actions and BLM authorized actions/uses near or within special areas consistent with ROD/RMP objectives and management direction for special areas?

Monitoring Requirements

Review program and actions for consistency with ROD/RMP objectives and direction.

Findings:

The Roseburg District has 11 special areas that total approximately 12,227 acres, including the 6,581 acre North Bank Habitat Management Area / ACEC.

Additional areas were proposed for ACEC status as a result of the Western Oregon Planning Revision effort and analyzed to determine if they meet the requirements for designation as ACECs. As a result, the 34 acre Callahan Meadows ACEC was designated in the 2008 Roseburg ROD/RMP.

Permanent vegetation monitoring plots have been established and baseline data collected in the North Myrtle, Red Ponds, Beatty Creek, Myrtle Island, Bushnell-Irwin Rocks, and Bear Gulch ACECs/RNAs. This information is used to characterize existing vegetation and to monitor long-term vegetation changes. The data

was entered into a regional database for vegetation occurring within Research Natural Areas throughout the Pacific Northwest. This database is maintained by the Pacific Northwest Research Station, USFS, in Corvallis, Oregon.

Baseline fungi, lichen, and bryophyte inventories have been completed on approximately 2,100 acres in District Areas of Critical Environmental Concern (ACECs) and Research Natural Areas (RNAs).

The BLM controlled noxious weeds on the North Bank Habitat Management Area/ACEC including: Himalayan blackberry, English hawthorn, Scotch broom, Canada thistle and other thistle species (bull, milk, and Italian). A prescribed burn, timed to coincide with the early seed development stage, was conducted on the North Bank Habitat Management Area/ACEC to control medusahead wildrye, a noxious weed.

In August of 2011, a section of the North Umpqua Wild & Scenic River/ACEC was rafted, with the objective of manually removing false brome growing in areas along the river bank.

Seven headcut stabilization sites were monitored through general view photo plots. Stabilization of these sites was done in 2003 – 2004. In addition willows were planted within eroded riparian areas to stabilize streambanks.

Monitoring of water quality was done by monitoring of temperature, flow and precipitation.

Conclusion:

ROD/RMP requirements were met

North Umpqua Wild and Scenic River

Implementation Monitoring

Monitoring Question 1:

Are BLM authorized actions consistent with protection of the Outstandingly Remarkable Values of designated, suitable and eligible, but not studied, rivers?

Monitoring Requirements:

Annually, files on all actions and research proposals within and adjacent to Wild and Scenic River corridors will be reviewed to determine whether the possibility of impacts on the Outstandingly Remarkable Values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.

Monitoring Performed:

Monitoring of recreational use in the North Umpqua River was conducted between May 20 and September 15 through a Cooperative Management Agreement between the Roseburg District BLM and the Umpqua National Forest, North Umpqua Ranger District. BLM had the lead on monitoring and production of the monitoring

report for the entire river corridor. The USFS had the lead on issuing Special Recreation Permits to commercial river outfitters and fishing guides. Employees engaged in monitoring included one full-time BLM Outdoor Recreation Planner, two seasonal BLM Recreation Technicians and one seasonal USFS Recreation Technician.

Objectives of the river monitoring program were to:

- Monitor the five Outstanding Remarkable Values, Fisheries, Water Quality and Quantity, Cultural, Scenic and Recreation on the North Umpqua Wild and Scenic River. Provide a BLM/USFS presence on the river to contact, inform and educate users.
- Document and monitor visitor use including commercial and public use.
- Coordinate management of the river between the BLM and Umpqua National Forest.
- Identify, minimize, and manage safety hazards and user conflicts on the North Umpqua River.

2011 Findings:

Commercial boating use , 1,835 visits, accounted for 43 percent of all use on the Wild and Scenic River corridor. Private floating included 2,395 visits or 57 percent of all use on the river. Total use (4,2330visits) was down 23 percent in 2011 compared to 2010. Visits to the BLM Wild and Scenic section was estimated to be have 381 floaters.

Fishing Use:

For the second year in a row, an effort was made to count numbers of individuals fishing on the river. This was principally done through drive-by observations, with little contact being made. It was difficult to get an accurate count of the numbers and types of people. It was also difficult to spot people fishing on the river from the highway due to vegetative screening, and determine if the activity was commercial or non-commercial. It is required that guides display a tag or sticker in their vehicles identifying themselves as guides. Very few were seen by river monitors. The recorded results for the BLM managed section of the river: Segment 4: BLM/USFS Boundary to Susan Creek - 211 people; Segment 5: Susan Creek to Rock Creek - 527 people.

Conflicts between users: During the daily monitoring patrols of the 2011 season, no major incidents were reported on the BLM segment of the Wild and Scenic River corridor. Groups monitored included fishermen, boaters and campers.

Conclusion:

ROD/RMP requirements were met.

Socioeconomic Conditions

Implementation Monitoring

Monitoring Question 1:

What strategies and programs have been developed, through coordination with state and local governments, to support local economies and enhance local communities?

Monitoring Requirements

Program Review

Findings:

Offering the allowable sale quantity is the predominant means through which the Roseburg District contributes to the local economy.

Conclusion:

The Roseburg District was unable to offer the full allowable sale quantity in fiscal year 2011. All of the volume offered this year was thinning, which yields smaller receipts than regeneration harvest. Additionally, the timber market has been in decline throughout the fiscal year, resulting in a no-bid sale and decreased receipts from timber sold.

Monitoring Question 2:

Are ROD/RMP implementation strategies being identified that support local economies?

Monitoring Requirements

Program Review

Findings:

The value of all timber sold in fiscal year 2011 was \$1,532,228.00. The monies associated with timber sales are paid as timber is harvested over the life of the contract, which is three years or less. Timber sale receipts collected by the Roseburg District in fiscal year 2011 from active harvesting totaled \$2,077,624.00. All of the receipts were from Oregon and California Railroad Lands. No sale receipts were collected from either Coos Bay Wagon Road or Public Domain Lands.

The value of District Contracting/Services for fiscal year 2011 was approximately \$5,479,000. There was an average of 115 full-time employees during fiscal year 2011. An average of 24 term, temporary, or cooperative student employees were employed at various times throughout the year.

In fiscal year 2011, Roseburg District had total appropriations of \$18,777,000.

- Oregon & California Railroad Lands (O&C) = \$11,093,000, including:
 - Deferred Maintenance = \$200,000
- Forest Ecosystems Health & Recovery = \$260,000
- Timber Pipeline = \$475,000
- Recreation Pipeline = \$295,000
- Title II, Secure Rural Schools = \$2,141,000
- Management of Lands & Resources (MLR) = \$2,270,000 including:
 - Abandoned Mine Land Mitigation = \$70,000
 - Deferred Maintenance = \$1,517,000
- Fire Related Programs = \$522,000

- Central Hazardous Materials = \$521,000
- Federal Highways Project = \$1,200,000

Conclusion:

Except for the deficiency of volume sold, ROD/RMP requirements were met.

Monitoring Question 3:

What is the status of planning and developing amenities that enhance local communities, such as recreation and wildlife viewing facilities?

Monitoring Requirements

Program Review

Findings:

North Bank Habitat Management Area/ACEC is currently undergoing planning for local recreational and wildlife viewing opportunities consistent with other ACEC objectives. Further detail of recreational or other amenities that would enhance local communities are described in the Annual Program Summary.

Conclusion:

ROD/RMP requirements were met.

Timber Resources

Implementation Monitoring

Monitoring Question 1:

By land-use allocation, how do timber sale volumes, harvested acres, and the age and type of harvest compare to the projections in the ROD/RMP?

Monitoring Requirements:

Program and data base review. The Annual Program Summary will report volumes sold. The report will also summarize annual and cumulative timber sale volumes, acres to be harvested, and stand ages and types of harvest for General Forest Management Areas, Connectivity/Diversity Blocks and Adaptive Management Areas, stratified to identify them individually.

Monitoring Performed:

Program and data base were reviewed and summary prepared.

Finding:

The comparison of timber sale volumes and acres reveal substantive differences compared to ROD/RMP management action/direction ASQ of 1.0 million cubic feet (45 million board feet) and ROD/RMP assumptions regarding mix of harvest types and number of regeneration and thinning acres. These differences are displayed in Table 9 of the Annual Program Summary.

Comment/Discussions:

To meet the ASQ commitment, the Roseburg District prepares environmental analyses, and conducts timber sale preparation which includes sale layout, cruising, appraising and contract preparation. Timber sales are then advertised and auctioned at oral auctions. When timber sales become active, contract administration is conducted to ensure contract compliance. Importantly, the Roseburg District is investing in the future of the forests through forest development and reforestation activities.

The Roseburg District offered a total of 12 advertised timber sales in fiscal year 2011, for a total volume of approximately 25.8 MMBF. All of the timber sales offered in fiscal year 2011 were commercial thinning or density management sales. The advertised sales contained harvest in the matrix, for an ASQ volume of 11.4 MMBF. Another 4.2 MMBF of volume from these sales was from Riparian Reserve density management associated with the commercial thinning and as such is not ASQ volume.

Of the 12 advertised timber sales, five contained density management treatments of plantations in Late-Successional Reserves. These sales are designed to accelerate the development of late-successional characteristics in these forest stands. These five sales produced approximately 10.2 MMBF of volume, which is not part of the ASQ.

Miscellaneous timber volume was produced from negotiated timber sales, which are generally salvage sales, rights-of-way timber sales, and modifications to operating advertised timber sales. In fiscal year 2011, approximately 2.0 MMBF of volume was produced from miscellaneous sale volume. The total volume of timber sold on the Roseburg District for fiscal year 2011 was approximately 27.7MMBF.

The value of all timber sold in fiscal year 2011 was \$1,532,228.00. The monies associated with timber sales are paid as timber is harvested over the life of the contract, which is three years or less. Timber sale receipts collected by the Roseburg District in fiscal year 2011 from active harvesting totaled \$2,077,624.00. All of the receipts were from Oregon and California Railroad Lands. No sale receipts were collected from either Coos Bay Wagon Road or Public Domain Lands.

Under Section 15 of the Small Business Act (15 U.S.C. 631), the BLM is required to sell a certain percent of advertised timber sale volume to businesses with less than 500 employees. For fiscal year 2010 this was calculated as 50 percent for the Roseburg District. When the requisite percentage is not achieved through the normal bidding process, a requirement is “triggered” to set aside timber sales for exclusive offering to small businesses. The Roseburg District was not required to set aside any sales for small business during fiscal year 2011.

Conclusion:

As found in plan evaluations (such as the September, 2004 Findings of the 8th Year Evaluation of the Roseburg District Record of Decision/Resource Management Plan and Evaluation Report) and the 2005 Analysis of the

Management Situation, the Roseburg Timber Management Program is not currently meeting the projections of the ROD/RMP.

Monitoring Question 2:

Were the silvicultural (e.g., planting with genetically selected stock, fertilization, release, and thinning) and forest health practices anticipated in the calculation of the expected sale quantity, implemented?

Monitoring Requirement:

Program and data base review. An annual District wide report will be prepared to determining if the silvicultural and forest health practices identified and used in the calculation of the Allowable Sale Quantity were implemented. This report will be summarized in the Annual Program Summary.

Monitoring Performed:

Program and data base were reviewed and summary prepared.

Finding:

Examination of fiscal year 2011 data indicates differences between implementation and ROD/RMP assumed levels of activity. These differences are shown in Table 10 of the Annual Program Summary.

Comment/Discussion:

See the Annual Program Summary discussion of silvicultural activities for explanations and discussion.

Conclusion:

As noted in the APS, silvicultural treatments were conducted on District, but these treatments vary from the assumed ROD/RMP levels. In the case of maintenance and pruning, the District exceeds the ROD/RMP levels, at 154 percent and 126 percent of assumed levels, respectively. The District has not achieved the assumed ROD/RMP levels of site preparation, planting, or fertilization, due to low levels of regeneration harvest and administrative appeals. See Table 10 in the Annual Program Summary for total achievements related to silvicultural activities.

Special Forest Products

Implementation Monitoring

Monitoring Question 1:

Is the sustainability and protection of special forest product resources ensured prior to selling special forest products?

Monitoring Requirements:

Program review.

Monitoring Performed:

Program was reviewed.

Findings:

The Roseburg District restricts the amount of plant material or plant area to be harvested through special provisions on permits. The permits also prohibit collection practices that may degrade the resources. Areas subject to heavy harvest may be rotated or rested as appropriate for at least two years. No permits are sold if Special Status Species cannot be clearly identified to permittee.

Conclusion:

ROD/RMP requirements were met.

Glossary

AMA - Adaptive Management Area - The Roseburg District Little River AMA is managed to develop and test approaches to integrate intensive timber production with restoration and maintenance of high quality riparian habitat.

Allowable Sale Quantity (ASQ) - an estimate of annual average timber sale volume likely to be achieved from lands allocated to planned, sustainable harvest.

Anadromous Fish - Fish that are hatched and reared in freshwater, move to the ocean to grow and mature, and return to freshwater to reproduce. Salmon, steelhead, and shad are examples.

Archaeological Site - A geographic locale that contains the material remains of prehistoric and/or historic human activity.

Area of Critical Environmental Concern (ACEC) - An area of BLM administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources, or other natural systems or processes; or to protect life and provide safety from natural hazards.

Best Management Practices (BMP) - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

Biological Diversity - The variety of life and its processes, including a complexity of species, communities, gene pools, and ecological function.

Candidate Species - Plant and animal taxa considered for possible addition to the List of Endangered and Threatened Species. These are taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

Cavity Nesters - Wildlife species, most frequently birds, that require cavities (holes) in trees for nesting and reproduction.

Commercial Thinning - The removal of merchantable trees from a stand to encourage growth of the remaining trees.

Connectivity/Diversity Blocks - Lands spaced throughout the matrix lands, which have similar goals as matrix but have management action/direction which affect their timber production. They are managed on a 150-year longer area control rotation, retain more green trees following regeneration harvest (12-18) and must maintain 25-30 percent of each block in late successional forest, where available.

Cubic Foot - A unit of solid wood, one foot square and one foot thick.

Cumulative Effect - The impact that results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Density Management - Cutting of trees for the primary purpose of widening their spacing so that growth of remaining trees can be accelerated. Density management harvest can also be used to improve forest health, to open the forest canopy, or to accelerate the attainment of old growth characteristics, if maintenance or restoration of biological diversity is the objective.

District Designated Reserves (DDR) - Areas designated for the protection of specific resources, flora and fauna, and other values. These areas are not included in other land use allocations nor in the calculation of the ASQ.

Eligible River - A river or river segment found, through interdisciplinary team and, in some cases interagency review, to meet Wild and Scenic River Act criteria of being free flowing and possessing one or more Outstandingly Remarkable Values.

Endangered Species - Any species defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range and published in the Federal Register.

Environmental Assessment (EA) - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment; and whether a formal Environmental Impact Statement is required; and to aid an agency's compliance with NEPA when no EIS is necessary.

General Forest Management Area (GFMA) (See Matrix) - This is the land use designation, on which scheduled harvest and silvicultural activities will be conducted that contribute to the ASQ.

Harvested Volume or Harvested Acres - Refers to timber sales where trees are cut and taken to a mill during the fiscal year. Typically, this volume was sold over several years. This is more indicative of actual support of local economies during a given year.

Hazardous Materials - Anything that poses a substantive present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise managed.

Land Use Allocation (LUA) - Allocations which define allowable uses / activities, restricted uses / activities and prohibited uses / activities. Each allocation is associated with a specific management objective.

Late-Successional Forests - Forest seral stages that include mature and old-growth age classes.

LSR - Late Successional Reserve - lands which are managed to protect and enhance old-growth forest conditions.

Matrix Lands - Land outside of reserves and special management areas that will be available for timber harvest that contributes to the ASQ.

MMBF - abbreviation for million board feet of timber

Noxious Plant/Weed - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

O&C Lands - Public lands granted to the Oregon and California Railroad Company, and subsequently revested

to the United States, which are managed by the Bureau of Land Management under the authority of the O&C Lands Act.

Offered (sold) Volume or Offered (sold) Acres - Any timber sold during the year by auction or negotiated sales, including modifications to contracts. This is more of a check on the District's success in meeting the ASQ than it is a socioeconomic indicator, since the volume can get to market over a period of several years.

Off-Highway Vehicle (OHV) - Any motorized track or wheeled vehicle designed for cross-country travel over natural terrain. The term, "Off Highway Vehicle" will be used in place of the term "Off Road Vehicle" to comply with the purposes of Executive Orders 11644 and 11989. The definition for both terms is the same.

Open: Designated areas and trails where Off Highway Vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343.

Limited: Designated areas and trails where Off Highway Vehicles are subject to restrictions limiting the number or types of vehicles, date, and time of use; limited to existing or designated roads and trails.

Closed: Areas and trails where the use of Off Highway Vehicles is permanently or temporarily prohibited. Emergency use is allowed.

Outstanding Natural Area (ONA) - An area that contains unusual natural characteristics and is managed primarily for educational and recreational purposes.

Outstandingly Remarkable Values (ORV) - Values among those listed in Section 1 (b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values . . ." Other similar values that may be considered include ecological, biological or botanical, paleontological, hydrological, scientific, or research.

Precommercial Thinning - The practice of removing some of the trees less than merchantable size from a stand so that remaining trees will grow faster.

Prescribed Fire - A fire burning under specified conditions that will accomplish certain planned objectives.

"Projected Acres" are displayed by age class for the decade. These age class acres are estimates derived from modeling various silvicultural prescriptions for regeneration, commercial thinning and density management harvest or are based on other assumptions.

Regeneration Harvest - Timber harvest conducted with the partial objective of opening a forest stand to the point where favored tree species will be reestablished.

Regional Ecosystem Office (REO) - The main function of this office is to provide staff work and support to the Regional Interagency Executive Committee (RIEC) so the standards and guidelines in the forest management plan can be successfully implemented.

Regional Interagency Executive Committee (RIEC) - This group serves as the senior regional entity to assure the prompt, coordinated, and successful implementation of the forest management plan standards and guidelines at the regional level.

Research Natural Area (RNA) - An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes.

Resource Management Plan (ROD/RMP) - A land use plan prepared by the BLM under current regulations in accordance with the Federal Land Policy and Management Act.

Rights-of-Way - A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs, and the lands covered by such an easement or permit.

Rural Interface Areas - Areas where BLM administered lands are adjacent to or intermingled with privately owned lands zoned for 1 to 20-acre lots or that already have residential development.

Seral Stages - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage. There are five stages:

Early Seral Stage - The period from disturbance to crown closure of conifer stands usually occurring from 0-15 years. Grass, herbs, or brush are plentiful.

Mid Seral Stage - The period in the life of a forest stand from crown closure to ages 15-40. Due to stand density, brush, grass, or herbs rapidly decrease in the stand. Hiding cover may be present.

Late Seral Stage - The period in the life of a forest stand from first merchantability to culmination of Mean Annual Increment. This is under a regime including commercial thinning, or to 100 years of age, depending on wildlife habitat needs. During this period, stand diversity is minimal, except that conifer mortality rates will be fairly rapid. Hiding and thermal cover may be present. Forage is minimal.

Mature Seral Stage - The period in the life of a forest stand from Culmination of Mean Annual Increment to an old growth stage or to 200 years. This is a time of gradually increasing stand diversity. Hiding cover, thermal cover, and some forage may be present.

Old Growth - This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old growth stages.

Silvicultural Prescription -A detailed plan, usually written by a forest silviculturist, for controlling the establishment, composition, constitution, and growth of forest stands.

Site Preparation - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment that is favorable for survival of suitable trees during the first growing season. This environment can be created by altering ground cover, soil or microsite conditions, using biological, mechanical, or manual clearing, prescribed burns, herbicides or a combination of methods.

SEIS Special Attention Species - a term which incorporates the “Survey and Manage” and “Protection Buffer” species from the Northwest Forest Plan.

Special Status Species - Plant or animal species in any of the following categories

- Threatened or Endangered Species
- Proposed Threatened or Endangered Species
- Candidate Species
- State-listed Species
- Bureau Sensitive Species

Visual Resource Management (VRM) - The inventory and planning actions to identify visual values and establish objectives for managing those values and the management actions to achieve visual management objectives.

Wild and Scenic River System - A National system of rivers or river segments that have been designated by Congress and the President as part of the National Wild and Scenic Rivers System (Public Law 90-542, 1968). Each designated river is classified as one of the following:

Wild River -A river or section of a river free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Designated wild as part of the Wild and Scenic Rivers System.

Scenic River -A river or section of a river free of impoundments, with shorelines or watersheds still largely primitive and undeveloped but accessible in places by roads. Designated scenic as part of the National Wild and Scenic Rivers System.

Recreational River - A river or section of a river readily accessible by road or railroad, that may have some development along its shorelines, and that may have undergone some impoundment or diversion in the past. Designated recreational as part of the National Wild and Scenic Rivers System.

Acronyms/Abbreviations

ACEC	-	Area of Critical Environmental Concern
ACS	-	Aquatic Conservation Strategy
AD	-	Administratively Determined
APS	-	Annual Program Summary
ASQ	-	Allowable Sale Quantity
BA(s)	-	Biological Assessments
BLM	-	Bureau of Land Management
BMP(s)	-	Best Management Practices
CBWR	-	Coos Bay Wagon Road
CFER	-	Cooperative Forest Ecosystem Research
CT	-	Commercial Thinning
CX	-	Categorical Exclusions
CWA	-	Clean Water Act
DEQ	-	Oregon Department of Environmental Quality
DM	-	Density Management
EA	-	Environmental Analysis
EIS	-	Environmental Impact Statement
EPA	-	U.S. Environmental Protection Agency
ERFO	-	Emergency Relief Federally Owned
ERMA	-	Extensive Recreation Management Area
ESA	-	Endangered Species Act
ESU	-	Evolutionarily Significant Unit
FEIS	-	Final Environmental Impact Statement
FLPMA	-	Federal Land Policy and Management Act
FONSI	-	Finding of No Significant Impacts
FY	-	Fiscal Year
GFMA	-	General Forest Management Area
GIS	-	Geographic Information System
GTR	-	Green Tree Retention
IDT	-	Interdisciplinary Teams
LSR	-	Late-Successional Reserve
LUA	-	Land Use Allocation
LWD	-	Large Woody Debris
MMBF	-	Million board feet
MOA	-	Memorandum of Agreement
MOU	-	Memorandum of Understanding
MSA	-	Magnuson-Stevens Act
NEPA	-	National Environmental Policy Act
NFP	-	Northwest Forest Plan
NMFS	-	National Marine Fisheries Service
O&C	-	Oregon and California Revested Lands
ODF	-	Oregon Department of Forestry
ODFW	-	Oregon Department of Fish and Wildlife
OSU	-	Oregon State University
PACs	-	Province Advisory Councils

PD	-	Public Domain
PILT	-	Payment in lieu of taxes
PL	-	Public Law
PSQ	-	Probable Sale Quantity
RA	-	Resource Area
REO	-	Regional Ecosystem Office
RIEC	-	Regional Interagency Executive Committee
RMP	-	Resource Management Plan
ROD/RMP		The Roseburg District Resource Management Plan/ Record of Decision
RO	-	Forest Service Regional Office
ROD	-	Record of Decision
RR	-	Riparian Reserve
ROW	-	Rights-of-Way
SEIS	-	Supplemental Environmental Impact Statement
S&G	-	Standard and Guideline
S&M	-	Survey and Manage
SRMA	-	Special Recreation Management Area
SRP	-	Special Recreation Permit
TMP	-	Transportation Management Plan
USDA	-	U.S. Department of Agriculture
USFS	-	U.S. Forest Service
USFWS	-	U.S. Fish and Wildlife Service

**United States Department of the Interior
Bureau of Land Management**

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