

# **Annual Program Summary and Monitoring Report for Fiscal Year 2012**

**BLM**  
Klamath Falls Resource Area



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.

U.S. Department of Interior  
Bureau of Land Management

Klamath Falls Resource Area

ANNUAL PROGRAM  
SUMMARY

and

MONITORING REPORT  
FISCAL YEAR 2012



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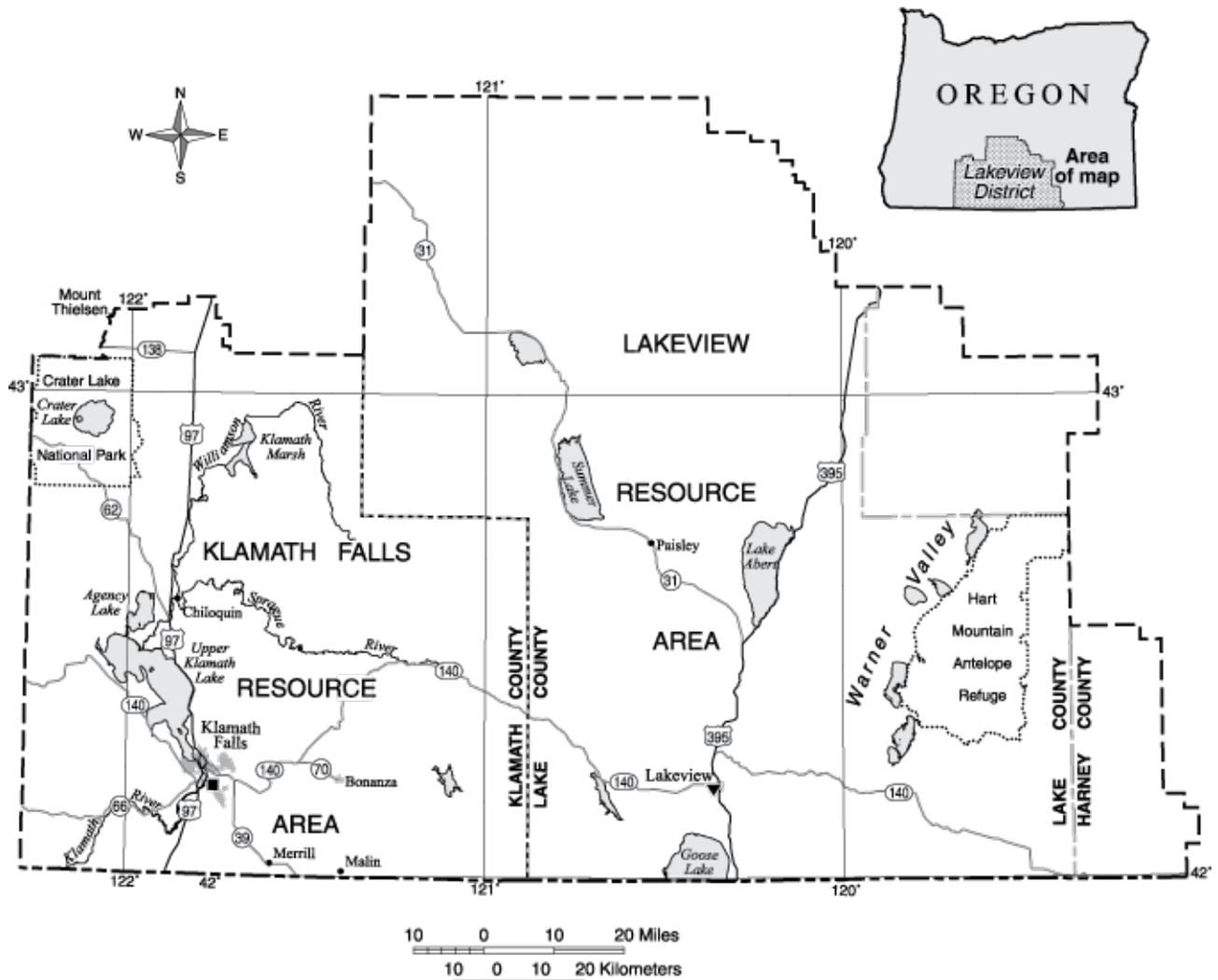
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**FIGURE 1 - GENERAL LOCATION MAP**



**LEGEND**

- ▼ BLM DISTRICT OFFICE
- BLM RESOURCE AREA OFFICE
- - - BLM DISTRICT BOUNDARY
- · - · - BLM RESOURCE AREA BOUNDARY
- - - STATE BOUNDARY
- (97)— U. S. HIGHWAY
- (38)— STATE HIGHWAY

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 Bureau of Land Management  
**Lakeview District**  
 2005



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# **KLAMATH FALLS RESOURCE AREA ANNUAL PROGRAM SUMMARY**

## **Fiscal Year 2012**

### **1.0 Introduction**

The Annual Program Summary (APS) is a review of the programs on the Klamath Falls Resource Area (KFRA), Bureau of Land Management (BLM) for the period of October 1, 2012 through September 30, 2013. The KFRA encompasses the southwestern portion of the Lakeview District, in southern Oregon (see Figure 1). The APS addresses the accomplishments of the KFRA and provides information concerning the KFRA budget, timber receipt collections, and payments to Klamath County. Included with this APS is the Monitoring Report for the KFRA in fiscal year (FY) 2012. The Monitoring Report compiles the results and findings of implementation monitoring for FY 2012, the eighteenth full fiscal year of implementation of the KFRA Resource Management Plan (RMP). These reports are a requirement of the Klamath Falls Resource Area Record of Decision and Resource Management Plan, designed to report to the public and local, state and federal agencies a broad overview of activities and accomplishments for FY 2012.

The Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl, referred to as the Northwest Forest Plan (NFP), was signed in April 1994. With the signing of this document began the implementation of the Northwest Forest Plan. Subsequently, in June 1995, the KFRA began implementation of the RMP, which incorporates all aspects of the Northwest Forest Plan, with the signing of the RMP Record of Decision (ROD). The ROD established a new allowable harvest level effective October 1, 1994, which is the beginning of Fiscal Year 1995, so related activities during the entire fiscal year of 1995 were included in the accomplishments reported for FY 1995.

This APS was printed and mailed out to over 340 interested parties on our mailing list each year from 1995 through 2011. In order to save costs and reduce waste, the 2012 APS was only mailed to those who specifically requested a printed copy. The online version of the APS can be accessed at the following website: <http://www.blm.gov/or/districts/lakeview/plans/lakeviewrmp.php>

### **2.0 Summary of Accomplishments**

The manner of reporting accomplishments differs between the various programs. Some resource programs lend themselves well to a statistical summary of activities while others are best summarized in short narratives. Table 2.1 provides a summary of the accomplishments for some resource activities for fiscal year 2012. These accomplishments are compared against cumulative accomplishments for 1995-2012. Further details concerning individual programs may be obtained by contacting the Klamath Falls Resource Area Office.

**Table 2.1 – Klamath Falls Resource Area, Fiscal Year 2012 Summary of Resource Management Actions, Directions, and Accomplishments**

<b>Management Practice/Activity</b>	<b>Units</b>	<b>FY2012 Accomplishments</b>	<b>FY 95-12 Cumulative</b>	<b>Projected Practices 18 yrs.</b>
<b>Forest and Timber Resources</b>				
Regeneration harvest	Acres	1	260	2952
CT/Density Management (HLB)	Acres	2349	22069	19746
CT/Density Management (Reserves)	Acres	149	477	0
Mortality Salvage	Acres	0	8592	0
Timber volume sold (HLB)	MMBF	6.47	103.94	113.58
Timber volume sold (HLB)	MMCF	1.13	16.09	19.98
Timber volume sold (reserves)	MMBF	0.15	1.44	0
Timber volume sold (reserves)	MMCF	0.03	0.34	0
Pre-commercial thinning (HLB)	Acres	590	4069	1260
Pre-commercial thinning (Reserves)	Acres	0	1017	0
Restoration Thinning (Understory)	Acres	339	11447	7920
Brushfield/hardwood conversion	Acres	39	147	0
Site preparation	Acres	281	746	4500
Planting - regular stock	Acres	186	3578	6480
Planting - genetically selected	Acres	0	0	2070
Vegetation control, mechanical/hand	Acres	0	3284	4050
Fertilization	Acres	0	0	576
Pruning	Acres	0	650	522
<b>Stewardship/Juniper Woodland Harvest Information</b>				
Juniper Sawlog Volume	MBF	0	2,179	N/A
Juniper Sawlog Volume	Tons	1,701	1,701	N/A
Stewardship Hog Fuel Volume	Tons	18,188	48,739	N/A
J Stewardship Clean Chip Volume	Tons	6,766	25,669	N/A
Juniper Sawlog Acres Yarded	Acres	0	1,212	up to 17,000
Stewardship Hog Fuel Acres Yarded	Acres	0	548	Up to 17,000
Stewardship Clean Chip Acres Yarded	Acres	0	2,864	up to 17,000
Stewardship Biomass Acres yarded	Acres	4,226	4,226	
<b>Prescribed Fire/Fuels Treatment Accomplished</b>				
Prescribed Fire (hazard reduction)	Acres	30	18,480	445
Prescribed Fire (wildlife habitat/forage)	Acres	500	13,563	300
Natural/artificial ignition prescribed	Acres	65	76,098	0
Fire for ecosystem enhancement				
Vegetation control, mechanical/hand	Acres	1,100	16,374	350
Juniper Removal	Acres	230	24,244	N/A
<b>Noxious Weeds</b>				
Noxious weeds chemical control	Sites/acres	18/522	334/3,659*	275/1,200
Noxious weeds other control methods	Sites/acres	0/0	25/395*	100/430

CT = Commercial Thinning, HLB = Harvest Land Base

\*Totals include repeat treatments on most areas.

**Table 2.1—RMP Planning Area, Summary of Resource Management Actions, Directions, and Accomplishments (Continued)**

<b>RMP Resource Allocation/ Management Practice/Activity</b>	<b>Activity Units</b>	<b>FY 2012 Accomplishments</b>	<b>FY 95-12 Cumulative</b>	<b>Projected Practices Eighteen Years</b>
<b>Rangeland Resources</b>				
Livestock grazing permits or leases	Permits/Leases	4	176	150
Animal Unit Months (actual)	AUMs	~9,470	11,000 (average)	NA
Livestock fences constructed	Miles	0	19.8	
Water developments	Actions	0	3	
<b>Realty Actions</b>				
Realty, land sales	Actions/Acres	0	3,056.75	NA
Realty, land purchase	Acres	30	30	NA
Realty, land exchanges	Actions	0	0	NA
	Acres acquired	0	0	NA
	Acres disposed	0	680	NA
Realty, R&PP Leases/patents	Actions/acres	0	0	NA
Realty, Road easements acquired for agency/public use	Actions/miles	1/0.5	3/1	
Realty, New road rights-of-way	Actions/miles	7/9.8	81/444.3	NA
Realty, utility rights-of-way granted	Actions/miles	0	14/29.2	NA
Realty, Comm. Site Leases granted	Actions/acres	1/3	14/120.92	NA
Realty, wind energy test sites (closed)	Actions/acres	1/4,400	0/0	NA
Realty, withdrawals completed	Actions/acres	0/0	1/1	NA
Realty, withdrawals revoked	Actions/acres	0/0	11/11,281	NA
<b>Energy and Minerals Actions</b>				
Mineral/energy, oil and gas leases	Actions/acres	0/0	0/0	NA
Mineral/energy, total other leases	Actions/acres	0/0	49	NA
Mining plans approved	Actions/acres	0/0	0/0	NA
Mining claims patented	Actions/acres	0/0	0/0	NA
Mineral materials sites opened	Actions/acres	0/0	1/40	NA
Mineral material sites closed	Actions/acres	0/0	0/0	NA
<b>Recreation and Off-highway Vehicles</b>				
Maintained off-highway vehicle trails	Miles	0	0	NA
Constructed/Maintained hiking trails	Miles	9	19	NA
Recreation sites maintained	Number	24	24 (average)	NA
Special Use Permits	Actions	12	416	NA
<b>Cultural Resources</b>				
Cultural resource inventories	Sites/acres	48/3,097	2,014/133,605	NA
Cultural/historic sites nominated	Sites/acres	0/0	0/0	NA
<b>Hazardous Materials</b>				
Hazardous material sites identified	Sites	0	7	NA
Hazardous material sites remediated	Sites	0	7	NA

## 3.0 Budget and Employment

In Fiscal Year 2012, the Klamath Falls Resource Area had a total appropriation of approximately \$6.3 million. This included \$2,112,619 for Management of Lands and Resources (MLR) which was higher than previous years because it included \$1,480,341 for the Hamaker Road Project; \$2,751,000 for Oregon and California Railroad Lands (O&C); \$510,000 for Forest Ecosystem Health and Recovery; \$668,656 for prescribed fire/fuels treatment; \$93,000 for Recreation; and \$139,000 for Timber Sale. See Table 3.1.

In Fiscal Year 2012, there were 31 permanent employees on the KFRA. The number of temporary (38) and term (8) employees varied throughout the year with a total peak employment of 77 people.

**Table 3.1 - Resource Area Budget Fiscal Year 2012**

<b><u>Budget Source</u></b>	<b><u>FY 2012 Dollars</u></b>
Management Land and Resource	\$632,278
Management Land and Resource - Hamaker Road Project	\$1,480,341
O&C Lands	\$2,751,000
Forest Ecosystem Health and Recovery	\$510,000
Recreation Pipeline	\$93,000
Timber Sale Pipeline	\$139,000
Fire (Hazardous Fuels Reduction Program)	\$668,656
<b>Total Resource Area Budget</b>	<b>\$ 6,274,275</b>

## 4.0 Land Use Allocations within the Klamath Falls Resource Area

There are approximately 224,900 acres of public land administered by the BLM within the Klamath Falls Resource Area. The KFRA is divided into “Westside” and “Eastside” lands. The Westside lands are further separated into key and non-key watersheds as stipulated in the Northwest Forest Plan. The Resource Management Plan approved in June of 1995 specified different land management allocations on different portions of the resource area. These allocations provide the emphasis for which activities may occur on each land area. A detailed discussion of the various land use allocations or resource programs is not given in this Annual Program Summary, but can be found in the Resource Management Plan Record of Decision and supporting Environmental Impact Statement.

### **Late-Successional Reserves and Assessments**

The Klamath Falls Resource Area does not contain any mapped Late Successional Reserves (LSRs). The closest mapped Late Successional Reserve is to the north on the adjoining Winema National Forest. The Klamath Falls Resource Area contains fifteen unmapped Late Successional Reserves (UMLSRs), three District Designated Reserves (DDRs), and one Special Area (an Environmental Education Area), all designated for old-growth values. Each reserve is approximately 100 acres in size for a total of approximately 1,900 acres in reserves designated for late-successional values. Unmapped LSRs function as habitat patches that provide connectivity between larger areas of old-growth habitat within mapped LSRs.

## Matrix

The NFP/ROD (page C-44) and Klamath Falls Resource Area RMP ROD (page 56) require that the BLM and USFS provide for the retention of late-successional/old-growth fragments in the matrix, where little remains. The standards and guidelines are to be applied to any fifth field watershed in which federal forest lands are currently comprised of 15 percent or less late-successional forest, considering all land allocations. In preparing watershed analysis documents, the Resource Area completed an initial screening of watersheds including lands managed by the BLM-Redding Field Office, BLM-Alturas Field Office, BLM-Medford District Office, Klamath National Forest, Modoc National Forest, Rogue River National Forest, Winema National Forest, and the Fish and Wildlife Service, for compliance with the 15 percent retention standards and guidelines. Results from this analysis were reported in watershed analysis documents. Klamath Falls Resource Area FY 1995 through FY 2012 sales sold under the NFP have complied with the 15 percent rule using the analysis.

## 5.0 Aquatic Conservation Strategy

The Aquatic Conservation Strategy (ACS) was developed to restore and maintain the ecological health of watersheds and aquatic ecosystems. A set of Aquatic Conservation Strategy objectives was developed in the Northwest Forest Plan, to guide the review and implementation of management activities. The four components of the strategy - Riparian Reserves, Key Watersheds, Watershed Analysis, and Watershed Restoration - are designed to work together to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems.

### Riparian Reserves

Riparian Reserves are areas where riparian-dependent resources receive primary emphasis and where special standards and guidelines from the Northwest Forest Plan (NFP) Record of Decision (ROD) apply. Riparian Reserves are established adjacent to perennial and intermittent streams, springs, lakeshores, wetlands, and reservoirs.

### Watershed Analysis and Key Watersheds

Watershed analysis is required (NFP ROD) prior to implementing activities in Key watersheds. Watershed analyses should also be conducted in other watersheds as a basis for ecosystem planning and management. The primary purpose is to provide decision makers with an understanding of the ecological structure, functions, processes, and interactions occurring in a watershed along with the wide spectrum of human uses.

This information is obtained from a variety of sources including field inventory and observation, agency records, old maps and photos, and survey records and will be 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;
- Characterization of the geologic and hydrologic conditions of the watershed.

To date, watershed analyses have been completed for almost eighty percent of the resource area including all lands covered by the NFP. The remaining lands within the resource area are scattered parcels where resource management issues will be addressed on a case-by-case basis.

## **Watershed Restoration**

### **Roads**

Watershed restoration through road treatments ranges from obliteration to upgrading. Road treatments are identified during restoration planning or as part of other projects. When road-related resource concerns (such as habitat connectivity, water quality, diversion of flow paths, etc.) are identified, road treatments are developed to ensure that concerns are addressed in a way that accounts for current and future transportation needs while striving to meet ACS objectives.

With the large amount of mixed ownership in the forested lands, coordination with private landowners and other land management agencies is crucial to the success of any proposed road projects. Watershed analyses, road inventory data, and coordinated planning efforts like the Spencer Creek Coordinated Resource Management Plan (CRMP) provide a framework for road treatment decisions.

During FY 2012, watershed restoration road treatments included approximately five miles of road improvement and decommissioning of .3 miles of road. Objectives included reduced erosion and sediment delivery to streams and improved vehicle access. For a complete summary of road treatments, refer to Section 24.0 - Transportation and Roads and Table 24.1 and Aquatic Species and Habitat Table 9.1..

### **Riparian Habitat Enhancement**

Treatments that help maintain large conifers in Riparian Reserves are an important component of watershed restoration. Silvicultural practices have been implemented within riparian reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain aquatic conservation strategy objectives. Silvicultural prescriptions are written to maintain uneven aged stands and to maintain and improve the health and resiliency of the shade intolerant species (ponderosa pine, sugar pine, and Douglas fir). Understory reduction prescriptions are used to reduce the density of shade-tolerant species under the tree canopy for the purpose of reducing fire risk and enhancing the health of desired overstory trees. The thinning of densely stocked young stands and the reforestation of shrub-dominated stands with conifers are also used to enhance riparian habitat.

Miller Creek flows from Gerber Reservoir through Gerber Dam. 63 riparian acres adjacent to Miller Creek and two unnamed tributaries were manually treated by removing and loping encroaching juniper then hand-piling the material. In addition, 17 whole junipers were felled directly into the Miller Creek to enhance aquatic habitat. Also, approximately fifteen acres of riparian reserves in the Gerber Reservoir watershed were treated by removing trees that were encroaching on the riparian vegetation and natural floodplains to reduce completion for desirable riparian plant communities and reduce water demand from encroaching vegetation.

### **Stream/River Restoration**

Instream restoration projects are necessary when passive restoration will not meet resource goals in the short-term. Such projects are designed to restore instream habitat complexity, and can include bank stabilization, channel realignment, or addition of boulders and large woody debris.

Spencer Creek is a major tributary to the Klamath River located northwest of Keno, Oregon. In 2009 and 2010 log placement projects were a coordinated effort and partnership between Bureau of Land Management, US Fish and Wildlife Service and JWTR (a private land

management company). The intent of the treatments is to improve instream aquatic habitat and subsequently increase populations and distribution of aquatic species. Placement of large wood structures in the 3.1 mile reach of Spencer Creek was completed in early FY 2010 to restore natural sinuosity, increase channel complexity, and create hydraulics favorable to the formation of spawning gravel accumulations. Approximately 220 logs were placed at 54 specific log structure placement sites by helicopter. Post-treatment monitoring was continued by BLM personnel in FY 2012. This monitoring showed additional channel scour, gravel/debris accumulation and very little log movement.

The BLM in cooperation the Freshwater Trust, an Oregon based conservation group, implemented the final phase of the Wood River Delta channel restoration project. The project involved reestablishing connectivity in the Wood River delta, where the river enters Agency Lake. An excavator was used to restore 600 feet of former river channel by excavating approximately 3,500 cubic yards of silt and sand that had filled in the channel after the natural channel was cut off for navigation purposes around the turn of the century. This phase of the project restored natural connectivity to Agency Lake and restored wetland floodplain and deltaic river functions as well as sediment transport processes. This project is expected to result in improved water quality, fish habitat, and recreational boating access. Fencing constructed to manage beaver herbivory on willow plantings was maintained and willow survival/growth was monitored in FY2012.

An additional component of the project involved bank stabilization and construction of a recreational access trail within the Wood River Wetland day use and picnic area near the Wood River Bridge. Boulders were used to stabilize a severely eroding bank and provide a stair-step trail from the picnic area to the water's edge in an area of heavy foot traffic.

In the Klamath River Canyon, spot rocking on three miles of road along the BLM campground access road was done in cooperation with PacifiCorp. Also, as part of the Klamath River Hydroelectric Settlement Agreement (KHSA), portions of Interim Measure Number 8 was implemented (removal of partial side-cast boulder barrier in the bypassed reach) was implemented by PacifiCorp in cooperation with BLM to benefit fisheries and aquatic resources in the Klamath River. Additionally, two sites in the bypassed reach and one site in the peaking reach had approximately 500 cubic yards of gravel ( 0.5-3.0 inches in diameter), placed in November 2012. A conveyor truck was used to "shoot" gravel from the bank out into the Klamath River at both locations.

## **6.0 Air Quality**

The air quality program is mostly related to smoke impacts from natural and prescribed fires. The resource area has adopted the concept that the prescribed fire program is an integral part of ecosystem management under the RMP. Special care is taken to ensure that all prescribed fire projects are implemented in compliance with the Oregon Smoke Management Plan. Air quality considerations for the prescribed fire program include: burning when good smoke dispersal conditions exist, burning when fuels are dry, covering piles when appropriate, piling woody debris for more efficient combustion, and prompt mop-up of burned units to reduce residual smoke. There are three Class 1 airsheds in Klamath County (Crater Lake National Park, Mountain Lakes Wilderness Area, and Gearheart Wilderness Area), but none are managed by BLM. Prescribed burning accomplished in FY 2012 on the Klamath Falls Resource Area did not exceed the National Ambient Air Quality Standards (NAAQS).\

# 7.0 Water and Soils

## Water - Project Implementation

As discussed in the Watershed Restoration and Roads sections, projects that will benefit water resources were completed in FY 2012.

### Wood River Wetland

Water management at the Wood River Wetland continues to be adapted to meet vegetation establishment, water storage, water quality and soil recovery objectives. Monitoring to date indicates that progress is being made in improving water quality conditions, increasing emergent wetland vegetation cover, and rebuilding peat soils through the application of adaptive water management. Approximately 5,000 acre-feet of water was pumped from the wetland to Agency Lake in the winter and early spring of 2012. Approximately 3,000 acre-feet of water was diverted onto the property for irrigation during the summer and fall. See Monitoring and Inventory section below for more detailed information.

Maintenance of facilities and infrastructure was performed on roads, levees, and restoration project plantings including a Public Lands Day volunteer planting of riparian shrubs in the picnic area. New interpretative signage was installed at the visitor parking lot.

## Soils – Project Implementation

Topsy Road adjacent to Kerwin Ranch received maintenance. A slump in the road had made travel impossible causing the public to use the wet meadow for travel. After the maintenance was completed, the meadow road was ripped and blocked. Several other road projects were completed (see Section 24.0 - Transportation and Roads).

## State-listed Clean Water Act 303d Streams

Section 303(d) of the *Clean Water Act* (CWA) requires states to submit to the Environmental Protection Agency (EPA) a list of those waters which do not meet water quality standards as a result of either point or non-point sources and are in need of a total maximum daily load (TMDL) calculation. The TMDL is a target for water quality standards. The Oregon 303(d) list was updated for 2004-2006. Table 7.1 lists nine streams in the KFRA identified as water-quality limited streams by the Oregon Department of Environmental Quality (ODEQ). A TMDL and water quality management plan (WQMP) was completed for Klamath River and Lost River sub-basins in December 2010. BLM, as a Designated Management Agency, is required to complete and submit a water quality restoration plan (WQRP) by June, 2012.

**Table 7.1 - KFRA Clean Water Act 303(d) Water Bodies**

Stream Name	Basin/Sub-basin	Criteria for listing	TMDL Completed(?)
Barnes Valley Creek	Klamath/Lost River	Temperature - Year round	Yes
Long Branch Creek	Klamath/Lost River	Temperature - Year round	Yes
Miller Creek	Klamath/Lost River	Temperature - Summer	Yes
Antelope Creek	Klamath/Lost River	Temperature - Summer	Yes
Ben Hall Creek	Klamath/Lost River	Temperature - Year round	Yes
Johnson Creek	Klamath/Upper Klamath	Sedimentation	No
Clover Creek	Klamath/Upper Klamath	Sedimentation	No
		Temperature - Summer	Yes
Miners Creek	Klamath/Upper Klamath	Sedimentation	No
		Temperature - Year round	Yes
Spencer Creek	Klamath/Upper Klamath	Sedimentation	
		Temperature - Year round	Yes

## Water - Inventory and Monitoring

The BLM hydrology program initiated a study in 2010 to determine whether it will be feasible to manage the internal wetland hydrology in such a way to accelerate the rate of accumulation of organic soils for the purpose of restoring subsided wetland soils (land surface elevation lost through decomposition of peat soil). Because the land has subsided three to five feet as a result of past agricultural use, the land is now six to eight feet below the adjacent lake and river and therefore must be managed with a network of pumps, levees, and water control structures. BLM is investigating the possibility that land subsidence could be reversed and the surrounding lake and river hydrology reintroduced to the wetland by breaching the levees. BLM established 21 plots 2010 consisting of white feldspar clay horizons that allow for annual measurement of accumulated soil depth. Using cryogenic coring methods, BLM took initial measurements of soil accumulation 2011.

Preliminary results indicate on average, soil accumulation of 1.4 inches (range of 0.5 to 4.1 inches) in a variety of wetland vegetation community types. BLM also examined emergent vegetation in the adjacent lakes with respect to ground elevation to determine what land surface elevations are best suited to support the growth and survival of wetland vegetation under lake inundation conditions. Although it is apparent that it would take a long time to restore the land to its original elevation prior to subsidence, these preliminary results indicate that emergent vegetation could be maintained over the majority of the wetland under lake inundation after 10 to 15 years of management for subsidence reversal. This projection assumes a total elevation gain of approximately one to two feet of organic soil. Monitoring the clay horizon plots in addition to elevation change measurements from permanent benchmarks is planned for 2012 - 2013.

BLM hydrology staff inventoried and mapped streams in three timber sale planning areas (approximately 2,500 acres total) for stream presence and periodicity (perennial, intermittent, ephemeral).

**Table 7.2 - Watershed Activity Fiscal Year 2012**

<b><u>Monitoring</u></b>	<b><u>FY2012</u></b>	<b><u>FY95-12</u></b>
Streams measured for Proper Functioning Condition (miles)	0	87.6
Riparian Classification and Mapping (miles)	0	16.4
Streams monitored for water temperature	13	54*
Springs monitored for water temperature	10	44*
Streams measured for streamflow	1	4*
Springs measured for flow (Gerber Block)	10	34*
Sites measured for water chemistry	6	45*
Sediment sampling stations (monitoring of road sediment)	0	30*
Completed water rights applications with Oregon Water Resources	1	1*
Streams monitored for physical reference conditions (permanent reference pts)	0	6*
Wetlands monitored for physical reference conditions (# of reference sites)	10	40
Sites measured for bank erosion	0	10*
Streams monitored for riparian vegetation and soils in juniper treatment areas	0	2*
Springs monitored for riparian vegetation and soils in juniper treatment areas	0	1*

\*Figure represents maximum number of sites monitored and does not reflect cumulative totals for repeated data collection.

## **Soils – Inventory and Monitoring**

In FY 2012, pre-treatment soil disturbance monitoring was completed on the Wildgal and Replacement Gal timber sales, and within the Keno EA project area. Previously treated units were assessed to determine effectiveness of management actions and Best Management Practices on BLM soil resources. Soils staff assessed harvest units for surface cover and disturbance history. Soil parameters evaluated included forest floor conditions, rutting and compaction depth, and evidence of erosion. Preliminary results indicated the extent of detrimental ground disturbance from management activities averaged 5 to 29 percent of the unit areas. Continuation of effectiveness and implementation monitoring of soils on BLM-administered lands in the Spencer Creek watershed is planned for fiscal year 2013 to determine compliance status with standards and objectives of the RMP.

## **Klamath River Hydroelectric Facility Relicensing**

In FY 2012, hydrology and fisheries resource staff continued to coordinate with state and federal agencies, non-governmental organizations, and American Indian tribes on implementation of the Klamath Hydroelectric Settlement Agreement (KHSA). The KHSA was signed by the parties, including the Secretary of Interior on February 18, 2010. Resource area staff participated in various aspects of implementation activities included road and recreation facilities maintenance, weed control, and planning and implementation of a gravel enhancement project in the Project reach of the Klamath River.

The KHSA established an environmental review process intended to result in a determination by the Secretary of the Interior regarding whether removal of four hydroelectric dams on the Klamath River will advance restoration of salmonid fisheries of the Klamath Basin and is in the best interest of the public. Congressional authorization is necessary to allow the Secretary to make the final determination. The FEIS has been completed but the legislation is pending. PacifiCorp's FERC license has expired and they are operating under an annual license while the KHSA process is underway. The Klamath hydroelectric relicensing processes will resume if there is a negative Secretarial Determination, no affirmative Secretarial Determination, or if the State of California does not continue its abeyance of the Section 401 Clean Water Act Permit for PacifiCorp's annual license.

## **RMP Best Management Practices**

Best Management Practices are identified and required by the CWA as amended by the *Water Quality Act* of 1987. Best Management Practices are defined as methods, measures, or practices to protect water quality or soil properties. Best Management Practices are selected during the interdisciplinary environmental review process on a site specific basis to meet overall ecosystem management goals. The Klamath Falls Resource Area Record of Decision and Resource Management Plan lists Best Management Practices for various projects or activities that may be considered during the design of a project. During FY 2012, Best Management Practices were implemented on a number of different projects, including fuels reduction projects, restoration projects, timber sales, and road maintenance.

# 8.0 Terrestrial Species and Habitat Management

## Threatened/Endangered Species

### Northern Spotted Owl

In fiscal year 2012, KFRA wildlife biologists reclassified KFRA's northern spotted owl (NSO) habitat in preparation for landscape analysis recommended by the USFWS. The KFRA currently contains 14,843 acres of suitable northern spotted owl habitat based on this new classification. Last year's suitable habitat figure was 16,092 acres. The large change in suitable habitat acreage is mostly the result of the new classification effort, but also partially the result of timber sale induced habitat changes that took place in fiscal year 2012. The new classification is both more accurate and more precise than the 1994 classified data. The new habitat classification was used for consultation with the USFWS starting with the LOST Project Consultation in 2012. A detailed description of how the classification was performed and its results were provided to the USFWS as part of the consultation effort.

In 2012, the Bureau of Land Management worked cooperatively with Jeld-Wen Timber and Ranch (JWTR), U.S Forest Service (USFS) and Oregon State University (OSU) to continue the northern spotted owl monitoring program. Territories monitored are located on BLM, USFS, and private lands but monitored cooperatively due to the overlap of land ownership within the owl's home range.

General surveys of suitable northern spotted owl habitat were conducted by the BLM for the Keno and Hayden Fox environmental analyses, for other proposed timber sales, as well as for monitoring of fourteen historic territories. Of the fourteen sites surveyed/monitored, five were occupied with northern spotted owls. Barred owls were documented in five locations and are known to occupy five northern spotted owl nest territories. Two spotted owl young were detected in 2012, and barred owl young were detected at three of the historic spotted owl territories. This is up from one site last year. Barred owls continue to increase on the resource area.

## Special Status Species-Animals

### Bald Eagle (Bureau Sensitive - De-listed in 2007 from ESA List)

In 2007, the bald eagle was removed from the Endangered Species list. The bald eagle is now classified as a BLM sensitive species and will be managed accordingly. Bald eagle nest territories and winter roost areas are known to occur on BLM lands within the KFRA. In 2012, 18 of the 23 nest territories were occupied with at least one adult eagle. Nest sites were monitored cooperatively with BLM, Oregon Department of Fish and Wildlife (ODFW), and JWTR.

Midwinter surveys for bald and golden eagles were again conducted this year. The counts are conducted annually in the month of January to monitor trends of wintering populations of eagles.

Ten golden eagle nest sites were monitored. Of these ten nest territories, six were occupied and four produced young.

### Peregrine Falcon (Bureau Sensitive)

In 1999, the peregrine falcon was de-listed from the Endangered Species list according to the Endangered Species Act (ESA). The site found on private lands adjacent to BLM lands in 2011 was checked and determined to be vacant in 2012.

## **Yellow Rails (Bureau Sensitive)**

BLM policy directs that our actions should avoid contributing to the need to list these species as threatened or endangered. The yellow rail was thought to be extirpated from the western U.S. until it was rediscovered in the Wood River Valley in 1982. The BLM's Fourmile Creek wetland harbors one of the largest breeding populations in Oregon. The KFRA participated in a cooperative agreement between The Nature Conservancy (TNC), Fremont- Winema National Forest (WNF), and the Oregon Department of Fish and Wildlife (ODFW) to conduct a study of breeding yellow rails on the Fourmile area and Wood River Wetland from 1996-2002. Surveys were conducted on the Wood River wetland in 2011. None were conducted in 2012.

## **Bats (Three Species - Bureau Sensitive)**

Surveys for bats have been conducted in the KFRA for the Oregon Bat Grid (statewide survey and monitoring effort) from 2003-2010.

Under the RMP, the resource area is to minimize human disturbance to the maternity colony of Townsend's big-eared bats (*Corynorhinus townsendii*) – a sensitive species – at the Salt Caves on the Klamath River. A seasonal closure is in place from May 1 through September 15 at this site. In 2003, a Decision Record for the Cave Management Plan EA was prepared, which included recommendations for long-term adaptive management and monitoring. In recent years, it appeared that bats were no longer using the caves. Therefore, in FY 2011, monitoring of the Salt Caves was conducted to determine if the caves were still actively being used by bats. Although this year's monitoring showed evidence of use by bats in both caves, there was no confirmation that it was Townsend's Big-eared bats. No bat surveys were conducted in 2012.

## **Northern Goshawk**

In 2012, six historic goshawk nest sites were monitored. Two of those sites were occupied.

## **Sage Grouse (Bureau Sensitive)**

This species is ranked as a Bureau Sensitive species and was considered for listing under the Endangered Species Act. No historic lek sites were monitored in FY 2012. Habitat improvement projects around these historic lek sites continue. An environmental assessment of projects proposed to improve habitat adjacent to historic lek sites and improve mule deer winter range habitat is in progress.

## **Mollusks (Survey and Manage)**

Surveys have been conducted since 1999 for terrestrial and aquatic mollusks on the KFRA under the Survey and Manage (S&M) program. Six species of S&M mollusks are suspected or documented on the KFRA. Four species that have been documented within KFRA are: evening field slug (*Deroceras hesparium*), Klamath sideband (*Monadenia chaceana*), Klamath pebblesnail (*Fluminicola sp. nov. 1*), and diminutive pebblesnail (*Fluminicola sp. nov. 3*). Evening field slugs are found in wet meadows and streamside riparian areas. Pebblesnails are aquatic mollusks found in streams and springs. Two species suspected, but not documented, on the resource area are: Crater Lake tightcoil (*Pristiloma arcticum crateris*) and *Fluminicola sp. nov. 16*.

In 2012, surveys were conducted for terrestrial mollusk species within the Keno and most of the Hayden Fox proposed environmental analysis areas. No S&M terrestrial mollusks were located in these analysis areas.

## **Great Gray Owl (Survey and Manage)**

The great gray owl (GGO) is classified as a Survey and Manage species. Since 1996, the KFRA has conducted surveys for great gray owls in areas where ground-disturbing events are planned. In 2012, great gray owl surveys were completed in the Keno, Wildgal, and most of the Hayden Fox proposed project areas.

## Special Status Species - Plants

Surveys for special status vascular plants were conducted on approximately 10,000 acres of Klamath Falls Resource Area in 2012. Special status Fungi surveys were conducted on approximately 1,033 acres in 2012.

## Other Species of Concern

### Landbirds

Baseline Baseline surveys and monitoring for landbirds is a requirement under the Upper Klamath Basin and Wood River RMP/EIS. Other sampling on the resource area is being conducted to collect baseline data on presence/absence and trends of bird species in grazing allotments, within habitats where there are management concerns or threats, or for projects such as the relicensing of the hydropower operations on the Klamath River.

Other umbrella documents that recommend landbird surveys within certain priority habitats are published by Partners in Flight, and include "Management, Research and Monitoring Priorities for the Conservation of Neotropical Migratory Landbirds that Breed in Oregon," and "Birds in a Sagebrush Sea: Managing Sagebrush Habitats for Bird Communities."

Project work continued under cooperative agreement with the Klamath Bird Observatory and the Pacific Southwest Research Station of the U.S. Forest Service. Partners in this project included the World Wildlife Fund, Winema National Forest, Klamath Basin National Wildlife Refuge, and Point Reyes Bird Observatory. Three M.A.P.S (Monitoring Avian Productivity and Survivorship) stations are located on or adjacent to the KFRA in the Klamath River Canyon, Surveyor Mountain, and the Wood River Wetland.

## Terrestrial Habitat Management

For a narrative discussion of specific habitat elements (such as Green Tree Retention, Snag Recruitment, and Coarse Woody Debris) refer to the Monitoring Report portion of this document, specifically the Matrix Implementation Monitoring section.

### Nest Sites, Activity Centers, and Rookeries

For information on Nest Sites, Activity Centers, and Rookeries see Table 8.1.

**Table 8.1 - Monitoring for Nest Sites, Activity Centers, Rookeries, and Special Habitats (FY 2012)**

<b>Name of species</b>	<b>Unit monitored</b>	<b>Number units monitored</b>	<b>Result</b>	<b>Number new units built</b>
Western Sage Grouse	Historic Leks	0	N/A	N/A
Northern Goshawk	Historic Nests	6	2 occupied	0
Osprey	Historic Nests	0	N/A	0
Bald Eagle	Historic Nests	23	18 occupied	0
Golden Eagle	Historic Nests	10	4 occupied	2
Great Grey Owl	Nest Structures	0		0
Northern Spotted Owl	Nest Territories	14	5 occupied	0
Peregrine Falcon	High Potential Nest Sites	0	N/A	0

### Big Game Habitat

road closures continue to be maintained for deer, elk and other big game management on both the Eastside and the Westside of the resource area. Gates and other closures continue to be

maintained and improved. Additional road closures are planned in future years to reduce open road density in order to move closer to the management goal described in the RMP of 1.5 miles per section. Thermal clumps were designed into timber sales (see Timber Management section) during the preparation phase in 2012 to provide adequate escape and thermal cover within the timber harvest units. This is especially important in the winter range areas.

Continued habitat improvement for big game was coordinated with the fuels reduction programs. Biologists prioritized selected fuels units and helped set objectives where the treatments could enhance big game habitat. Several juniper thinning projects were completed in winter range.

## 9.0 Aquatic Species and Habitat Management

Planning and consultation of projects in the resource area included Wood River and Wood River Wetland restoration and maintenance, (see Wood River section), Miller Creek Riparian treatments and Spencer Creek channel treatments (Refer to Table 9.1 for information on aquatic habitat and fish passage). Fisheries resources, including Federally endangered suckers were monitored at Wood River Wetland ACEC and Gerber area grazing allotments.

**Table 9.1 - Aquatic Habitat / Fish Passage Management**

<b><u>Management Activity</u></b>	<b><u>FY2012</u></b>	<b><u>FY95-12</u></b>
Instream Fish Habitat Improvement (miles of stream treated)	.0	11.8
Fish Passage protected/improved - total miles of stream benefited	0	6
Irrigation diversions	4	10
Culverts inventoried	6	68
Culverts removed	0	4
Flumes created	0	0
Road crossings removed	0	1
Road crossings improved	0	13
Riparian Fish Habitat Improvement (acres treated/stream miles affected)	1.8	12.1
Roads improved - drainages, upgrades, stabilization, resurfacing (miles)	0	39.4
Roads relocated (miles)	0	8.3
Roads decommissioned and/or closed (miles)	0	31.6
Roads obliterated (miles)	0	5.4
Freshwater wetlands created (acres)	0	4,028.5
Freshwater wetlands maintained (acres)	3,990	3,990
Freshwater wetlands restored (acres)	0	4,028.5

### Threatened/Endangered Species

#### Lost River and Shortnose Suckers

Lost River suckers (*Deltistes luxatus*) and Shortnose suckers (*Chasmistes brevirostris*) generally occupy lakes as adults and spawn in streams during the spring and early summer. Both species spawn in the Wood River and are thought to spawn in the Wild & Scenic section of the Klamath River in the resource area. On December 11, 2012 the USFWS's Final Rule (50 CFR Part 17) for Lost River and Shortnose Sucker was published in the Federal Register. The Rule should become final on January 10, 2013. The Wood River, Crooked Creek and Agency Lake were designated as critical habitat for both species. The tributaries to Gerber Reservoir, Ben Hall Creek, Barnes Valley Creek, Longbranch Creek and Pitchlog Creek were also all designated as critical habitat for and contain only shortnose suckers.

Construction of the Wood River Wetland fish screen was completed in FY 2003. Screening the diverted water prevents entrainment of listed suckers and other native fish to the inner wetland cells of the project. The Wood River Wetland fish screen was operated for approximately three and one half months, between July and October of 2012. The fish screen allowed the BLM to divert approximately 3,000 acre feet of water from the Sevenmile Canal to the wetland without entraining fish.

The BLM continues to work with ODFW, Klamath Tribe biologists, fishing guides, and other resource management organizations to coordinate a fish-monitoring program in Agency Lake/Wood River that would meet fisheries monitoring objectives.

During FY 2010 and 2011, BLM personnel inventoried perennial pools in several tributaries of Gerber reservoir. These included Ben Hall Creek, Long Branch Creek, Barnes Valley Creek and Pitchlog Creek. In addition, the BLM and USFWS also sampled a subset of the pools to collect fish assemblage data. In FY2012 the information collected was used to better manage these tributaries as shortnose sucker habitat

## **Bull Trout**

The resource area does not currently administer lands known to contain bull trout (*Salvelinus confluentus*) populations. In early FY 2003, the USFWS proposed critical habitat for bull trout (50 CFR 17) including the Klamath Basin (Unit i). In FY 2004, USFWS designated critical habitat for bull trout in the Klamath Basin (69 FR 59995-60076, October 6, 2004). No critical habitat was specifically designated on BLM lands administered by the KFRA. No surveys were conducted by BLM staff for bull trout in FY 2012.

## **Special Status Species**

### **Oregon Spotted Frog (Candidate Species)**

In FY 2012, the BLM continued to monitor Oregon spotted Frog (OSF) populations at several study sites including the Wood River Wetland, Buck Lake, and Fourmile Wetland. These efforts were accomplished by teams made up of BLM, USFWS, USFS and USGS personnel. These teams also continued to remove invasive bullfrogs from within and adjacent to the Wood River Wetland OSF site. In addition,, in FY 2012, the BLM continued to contribute genetic samples collected during spring egg mass surveys to USGS and Colorado State University. These samples will be analyzed and the information will help managers better understand population isolation, isolation duration and genetic interaction between populations.

### **Aquatic Mollusks (Survey and Manage)**

Surveys have been conducted since 1993 for aquatic mollusks on the KFRA under the Survey and Manage (S&M) program, Frest and Johannes (1993, 1995, 1998 and 2000) and by PacifiCorp (2004). Two species that have been documented within KFRA are, Klamath pebblesnail (*Fluminicola sp. nov. 1*), and diminutive pebblesnail (*Fluminicola sp. nov. 3*). Pebblesnails are aquatic mollusks found in streams and springs. One species suspected, but not documented, on the resource area is the *Fluminicola sp. nov. 16*.

In 2011, surveys were conducted for mollusk species. Several sites of terrestrial mollusks were recorded within the Wildgal project area, however no survey and manage aquatic mollusks were located. In FY 2012, no additional surveys were conducted.

## **Endangered Species Act Consultation**

Section 7 Endangered Species Act Consultations are being continued on individual projects that have the potential to affect endangered suckers. The designated critical habitat units administered by the BLM for the listed sucker species is predominantly on the eastside of the

resource area and the Wood River. Designated, unoccupied bull trout critical habitat exists adjacent to the Wood River Wetland as Sevenmile Canal, Agency Lake and the Wood River.

## **Aquatic Habitat Restoration**

### **Roads**

Road activities to improve water quality continue to be a focus for reducing sediment impacts to aquatic habitat. (Refer to section 24.0 Transportation and Roads.) Over the entire resource area, 110 miles of roads were maintained in FY2012.

### **Fish Habitat**

In FY2011, as part of ongoing improvements to the Wood River channel near the confluence of Agency Lake, one side channel was maintained to provide increased flow for improved fish passage and fish passage for a greater range of flow conditions. It is expected that this work will provide for increased cold water refugial habitat during the warm summer months and provide a secondary passage from Agency Lake into the Wood River. In FY2010, the BLM in cooperation the Freshwater Trust, an Oregon based conservation group, implemented the final phase of the Wood River Delta channel restoration project. The project involved reestablishing connectivity in the Wood River delta, where the river enters Agency Lake. An excavator was used to restore 600 feet of former river channel by excavating approximately 3,500 cubic yards of silt and sand that had filled in the channel after the natural channel was cut off for navigation purposes around the turn of the century. This phase of the project restored natural connectivity to Agency Lake and restored wetland floodplain and deltaic river functions, as well as sediment transport processes. This project is expected to result in improved water quality, fish habitat, and recreational boating access. In FY 2011, a 20-person hand crew was utilized to recontour the excavated banks of the new channel. Using hand tools, the crew lowered the elevation of the banks to facilitate native wetland plant revegetation. In addition, BLM personnel installed 4 fenced exclosures on the new banks, and 450 willow cuttings were planted inside and outside the exclosures. This will allow the BLM to monitor the impact of herbivores on the willows. This fencing constructed to manage beaver herbivory on willow plantings was maintained and willow survival/growth was monitored in FY2012.

Miller Creek flows from Gerber Reservoir through Gerber Dam. 63 riparian acres adjacent to Miller Creek and two unnamed tributaries were manually treated by removing and lopping encroaching juniper then hand-piling the material. In addition, 17 whole junipers were felled directly into Miller Creek to enhance aquatic habitat. Work was accomplished on 1.25 miles of Miller Creek and .55 miles of the two unnamed tributaries. Also, approximately fifteen acres of riparian reserves in the Gerber Reservoir watershed were treated by removing trees that were encroaching on the riparian vegetation and natural floodplains to reduce competition for desirable riparian plant communities and reduce water demand from encroaching vegetation.

### **Fisheries Management**

In cooperation with Oregon Department of Fish and Wildlife (ODFW), a harmful population of yellow perch was removed from Upper Midway Reservoir in preparation for re-stocking with largemouth bass and crappie. The reservoir was stocked with catchable and fingerling bass in the summer of 2006 and large (broodstock) bass were stocked in spring of 2007. It is expected that it may take one to two years for this population to mature into a quality bass fishery. Before yellow perch were illegally introduced, this reservoir provided an outstanding bass and crappie fishery. In 2007, ODFW supplemented the largemouth bass population in Willow Valley Reservoir by stocking 63 broodstock bass collected in Davis Lake (Oregon). In FY 2012, Willow Valley Reservoir was monitored with help from ODFW. Moderate numbers of several size classes of largemouth bass and other gamefish species were documented during the monitoring effort.

In FY2011, the BLM contributed to an ODFW redband/brown trout population monitoring project in Agency Lake, Wood River and tributaries. We PIT tagged approximately 200

redband trout and 180 brown trout. Several PIT tag reader arrays and video weirs were constructed and installed in the Wood River, Agency Creek, Fort Creek and Crooked Creek. During FY2012, two additional arrays were installed in the mainstem Wood River and all of the arrays were monitored by ODFW and USGS.

## **Klamath River Hydroelectric Facility Relicensing**

In FY 2012, hydrology and fisheries resource staff continued to coordinate with state and federal agencies non-governmental organizations, and tribes on the proposed Klamath Basin Restoration Agreement (KBRA) and the Klamath Hydro Settlement Agreement (KHSA).

As part of the Klamath River Hydroelectric Settlement Agreement (KHSA), portions of Interim Measure Number 7 were implemented by PacifiCorp in cooperation with BLM to benefit fisheries and aquatic resources in the Klamath River. Approximately 500 cubic yards of gravel, measuring between 0.5-3.0 inches diameter, was placed at two locations on the J.C. Boyle peaking reach of the Klamath River between November 14 and 16, 2011. Both locations are near campgrounds on the Klamath River; Site RM 217.3 is at the BLM campground site, and Site RM 216.3 is at a dispersed use campground (Turtle Camp). A conveyor truck was used to “shoot” gravel from the bank out into the Klamath River at both locations. In 2012, two sites in the bypassed reach and one site in the peaking reach had approximately 500 cubic yards of gravel, measuring between 0.5-3.0 inches diameter, placed in November 2012.

Also in the Klamath River Canyon, spot rocking on three miles of road along the BLM campground access road was done in cooperation with PacifiCorp. Also, as part of the Klamath River Hydroelectric Settlement Agreement (KHSA), portions of Interim Measure Number 8 was implemented (removal of partial side-cast boulder barrier in the bypassed reach) was implemented by PacifiCorp in cooperation with BLM to benefit fisheries and aquatic resources in the Klamath River.

## **10.0 Pathogen, Disease, and Pest Management**

At present there are no serious, large-scale pest problems like Sudden Oak Death or Swiss Needle Cast on the Resource Area. However, this situation can change with environmental conditions, especially with forest insects. Endemic levels of insects such as fir engraver, western pine beetle, and mountain pine beetle that exist on the resource area can explode to epidemic levels during prolonged droughts when host trees are stressed and vulnerable.

## **11.0 Weed Management**

The objective of the noxious weed management program in the Klamath Falls Resource Area is to contain or reduce noxious weed infestations using an integrated pest management approach. Integrated pest management includes manual, mechanical, chemical, and biological control methods which are used in accordance with the Klamath Falls Resource Area Integrated Weed Control Plan (IWCP) and Environmental Assessment (EA)(OR-014-93-09), which is tiered to the Northwest Area Noxious Weed Control Program Environmental Impact Statement (EIS) (December 1985) and Supplement (March 1987). A statewide document - Vegetation Treatments Using Herbicides on BLM Lands in Oregon was prepared in October 2010. The Lakeview District, including Klamath Falls Resource Area, is completing a more local Vegetation Treatment EA with the help of contractors. The anticipated completion date for this EA is in late 2013.

## Inventories

The Klamath Falls Resource Area continues to survey BLM-administered land for noxious weeds by including noxious weeds in project clearance surveys, and through systematic inventories conducted through contracts. During FY 2012, there were over 15,000 acres of systematic inventories for noxious weeds conducted on the resource area. Inventory is typically accomplished through in-house surveys and by a contracted crew, focusing on stewardship projects in juniper and sagebrush areas as well as areas of future timber sales, and will be continued in 2013. Repeat monitoring reports were completed for a number of sites that were treated for noxious weeds in 2012 to measure treatment effectiveness.

## Control

Approximately 18 acres of noxious weed infestations spread over approximately 522 acres of BLM lands were chemically and manually treated by the Oregon Department of Agriculture (ODA) noxious weed treatment crew supervised by the ODA weed management specialist according to the annual operations plan and resource area priorities. Refer to Table 11.1 for a list of species recognized by the Klamath Falls Resource Area as noxious weeds to be treated, contained, and eradicated once a population is discovered in the resource area.

**Table 11.1 - Managed Weed Species**

<b><u>Species Name</u></b>	<b><u>Common name</u></b>
<i>Acroptilon repens</i>	Russian knapweed
<i>Adonis aestivalis</i>	Pheasant's eye
<i>Agropyron repens</i>	Quack grass
<i>Brachypodium sylvaticum</i>	False brome
<i>Cardaria draba</i>	Hoary cress
<i>Carduus acanthoides</i>	Plumeless thistle
<i>Carduus nutans</i>	Musk thistle
<i>Centaurea diffusa</i>	Diffuse knapweed
<i>Centaurea maculosa</i>	Spotted knapweed
<i>Centaurea pratensis</i>	Meadow knapweed
<i>Centaurea solstitialis</i>	Yellow starthistle
<i>Centaurea squarrosa</i>	Squarrose knapweed
<i>Chondrilla juncea</i>	Rush skeletonweed
<i>Cicuta douglasii</i>	Western waterhemlock
<i>Cirsium arvense</i>	Canada thistle
<i>Cirsium vulgare</i>	Bull thistle
<i>Conium maculatum</i>	Poison hemlock
<i>Cuscuta campestris</i>	Field dodder
<i>Cynoglossum officinale</i>	Houndstoungue
<i>Cytisus scoparius</i>	Scotch broom
<i>Dipsacus laciniatus</i>	Cutleaf teasel
<i>Euphorbia esula</i>	Leafy spurge
<i>Euphorbia myrsinites</i>	Myrtle spurge
<i>Hieracium aurantiacum</i>	Orange hawkweed
<i>Hypericum perforatum</i>	St. John's wort
<i>Iris pseudacorus</i>	Yellow flag iris
<i>Isatis tinctoria</i>	Dyer's woad
<i>Lepidium draba</i>	Whiteweed/Hoary cress
<i>Lepidium latifolium</i>	Perennial pepperweed
<i>Leucanthemum vulgare</i>	Ox-eye daisy
<i>Linaria dalmatica</i>	Dalmatian toadflax
<i>Linaria vulgaris</i>	Yellow toadflax
<i>Lotus corniculatus</i>	Birdsfoot trefoil
<i>Lythrum salicaria</i>	Purple loosestrife

<i>Myriophyllum spicatum</i>	Eurasian watermilfoil
<i>Nardus stricta</i>	Matgrass
<i>Onopordum acanthium</i>	Scotch thistle
<i>Onopordum tauricum</i>	Taurian thistle
<i>Potentilla recta</i>	Sulfur cinquefoil
<i>Ranunculus repens</i>	Creeping buttercup
<i>Salvia aethiopsis</i>	Mediterranean sage
<i>Senecio jacobaea</i>	Tansy ragwort
<i>Solanum rostratum</i>	Buffalobur
<i>Taeniatherum caput-medusae</i>	Medusahead rye
<i>Tribulus terrestris</i>	Puncture vine
<i>Tripleurospermum perforatum</i>	Scentless false mayweed
<i>Ventenata dubia</i>	North Africa grass
<i>Verbascum thapsus</i>	Common mullein
<i>Xanthium spinosum</i>	Spiny cocklebur

## 12.0 Special Areas/Management

### Wild and Scenic Rivers

The upper Klamath River is designated as a Wild and Scenic River in the national Wild and Scenic river system. The designated river in the resource area is an 11-mile segment, extending from just below the J.C. Boyle powerhouse to the Oregon-California state line. This same portion of the river is designated as an Area of Critical Environmental Concern (ACEC). Wild and Scenic rivers are to be managed to protect their outstandingly remarkable values (ORVs) and to maintain and enhance the natural integrity of river related values. All proposed management actions, or commercial activities, in the Wild and Scenic river corridor, are evaluated by Resource Area specialists to ensure that the ORVs are not degraded. If there are impacts associated with a project, adequate mitigation must be included to maintain or enhance resource values.

The upper Klamath River is quite popular for summer recreation, particularly whitewater rafting, camping, and fishing. In FY 2012, approximately 2,700 people floated the upper Klamath in rafts and kayaks, the majority of them traveled with one of the 12 commercial guides and outfitters permitted by the BLM. BLM recreation staff provided visitor assistance at the Spring Island launch site on every weekend from late May through the end of September. River rangers conducted six river patrols by raft to provide visitor assistance, monitor resource conditions, and maintain remote recreation sites along the river.

A draft Upper Klamath River Management Plan/EIS, released for public comment in April 2003, addressed options for managing the outstandingly remarkable values of this Wild and Scenic River. The preparation of the final Upper Klamath River Management Plan/EIS is on hold pending completion of the proposed relicensing effort for the PacifiCorp Klamath River Project (FERC License 2082).

### Wilderness

There is one Wilderness Study Area (WSA) in the Klamath Falls Resource Area, the Mountain Lakes WSA. There are 334 acres within the WSA boundary. The WSA borders the eastside of the Mountain Lakes Wilderness Area. The WSA is managed under the interim wilderness management policy to protect its wilderness values. Interim protection measures include routine patrols, monitoring and restriction of vehicles to existing roadways.

## Areas of Critical Environmental Concern

The Klamath Falls Resource Area has five Areas of Critical Environmental Concern (ACEC) and Research Natural Areas (RNA) totaling approximately 12,140 acres; three Special Botanical/Habitat Areas totaling 570 acres; and two Environmental Education Areas totaling 180 acres. One additional area has been proposed as an ACEC, which is 1,196 acres in size. Table 12.1 lists all Special Areas in the resource area. Only those special areas that received some specific management activities in FY 2012 are discussed below.

### Upper Klamath River ACEC

A draft Upper Klamath River Management Plan/EIS, released for public comment in April 2003, evaluated the expansion of the existing ACEC (from J.C. Boyle Powerhouse to J.C. Boyle Dam). The preparation of the final Upper Klamath River Management Plan/EIS is on hold pending completion of the proposed relicensing effort for the PacifiCorp Klamath River Project (FERC License 2082). For 2012, the KFRA accomplished zero acres of oak piling burning in the KRC and approximately 5 acres were underburned.

As part of the Klamath River Hydroelectric Settlement Agreement (KHSA), portions of Interim Measure Number 7 and 8 were implemented by PacifiCorp in cooperation with BLM to benefit aquatic/ botanical resources. Surveys for noxious weeds and special status plants were completed June through September 2012 over 4,100 acres of the Klamath River Canyon. One new special status species was recorded for Klamath Falls Resource Area and many new populations of noxious weeds were recorded. Management for noxious weeds in the Canyon will begin in 2013 and continue in subsequent years.

### Fourmile Creek Wetland Potential ACEC

A meeting on August 21, 2007 with Mike Barnes, National Withdrawal Coordinator from the OSO, discussed the status of the Bureau of Reclamation (BOR) withdrawal on the Fourmile Wetland Potential ACEC. The KFRA is still awaiting an official response to the Oregon State Office from the BOR. In FY 2012, the Oregon spotted frog site along Fourmile Creek was monitored by USGS, USFS and BLM personnel. OSF egg masses were documented in breeding areas similar to FY 2011.

### Tunnel Creek Wetland Potential ACEC

Buck Lake is a moderately high elevation, ephemeral lake that encompasses the upper reaches of Spencer and Tunnel Creeks providing unique spring-dominated wetland habitat and a designated 255-acre Oregon Spotted Frog (OSF) site. The northern part of the OSF site is managed by the USFS, Fremont-Winema National Forest, the central part by a private land owner and the southern part by the Klamath Falls Resource Area (BLM). The Buck Lake area is currently proposed for a cooperative restoration effort by the USFWS, USFS, BLM and the private land owner. In FY2009, the USFWS, USFS and BLM all coordinated and contributed to get a LiDAR (light detection and ranging) flight done for the Buck Lake project area. Approximately 4,500 acres of LiDAR data was collected by Watershed Sciences, Inc. and submitted in a GIS compatible format to all three agencies. This detailed elevational mapping data will be extremely valuable for wetland, hydrological, vegetative and fish/wildlife habitat management and during the proposed restoration efforts.

In FY 2012, the Buck Lake OSF site was monitored by USGS, USFS and BLM personnel. OSF egg masses were documented in breeding areas similar to FY 2010.

A complete inventory of rare Carex species and other sedge, grass, and rush species will be conducted in Tunnel Creek potential ACEC in 2013 by the Carex Working Group.

## Wood River Wetland ACEC

Activities occurring on the 3,200 acre Wood River Wetland (and adjacent BLM wetland areas) located in the Klamath Falls Resource Area are guided by a separate management plan entitled the Upper Klamath Basin and Wood River Wetland RMP/EIS, completed in July of 1995. Restoration work at the wetland is coordinated with several partners, including the Klamath Tribes, The Freshwater Trust, and Ducks Unlimited. A hydrology and water quality adaptive management monitoring report was completed titled "BLM Wood River Wetland Water Quality and Subsidence Reversal Monitoring Summary 2012" and is available online. In FY 2012, the Wood River Wetland Oregon spotted frog (OSF) site was monitored by USGS, USFWS, USFS and BLM personnel. OSF egg masses were documented in breeding areas similar to FY 2011. Four water control structures were maintained/upgraded in FY2012 to allow BLM personnel to better manage water levels for OSF habitat.

In cooperation with ODFW, BLM personnel conducted a fish assemblage project in FY2011 to assess fish species presence and abundance in the northern Wood River Wetland canal system. Relatively few fish were detected which further demonstrates the effectiveness of the BLM fish screen on Sevenmile canal.

### FY 2012 Wood River Wetland Accomplishments

#### Planning

- Continued partnership projects with Klamath Bird Observatory, Oregon Department of Fish and Wildlife, and U.S. Geological Survey

#### Tours/Presentations

- Sage Elementary School
- OIT (Oregon Institute of Technology) applied environmental sciences class
- Special Interest Groups
- Klamath Outdoor Science School (KOSS)
- Klamath Tribes

#### Project Implementation

- Completed 18th year of monitoring.
- Clean and refurbished 32 song bird nest boxes
- Continued Oregon spotted frog population monitoring.
- Major fish screen maintenance.
- Willow thinning and transplanting.
- Continued Oregon spotted frog genetics study with USGS.
- Wetland vegetation monitoring and mapping.
- Continued bullfrog trapping and removal
- Levee leak repair and road maintenance
- Regular maintenance of parking area, vault toilets, trail and access routes, and picnic areas.
- Renovation of the entrance kiosk and replacement of the three panel interpretive exhibit.
- Discharge pump and fish screen operation and maintenance
- Wood River levee leak inventory.
- Oregon spotted frog site vegetation enhancement
- Increased level of cottonwood protection and treatment
- Maintenance of Wood River canal water control structures (4).
- Redband and brown trout population monitoring project with ODFW.

### FY 2013 Planned Projects

- Continue water quality and nutrient study in cooperation with various research partners
- Soil accumulation, and elevation change studies
- OIT cooperative study of songbird use of nest boxes
- OIT cooperative study of Canada goose production
- Oregon spotted frog population monitoring study with USGS

- Continue vegetation monitoring and mapping
- Monitoring of artesian wells.
- Finish implementation of the final phase of the Wood River Channel project, pull out temporary erosion control
- Oregon spotted frog site enhancements
- A complete inventory of rare Carex species and other sedge, grass, and rush species will be conducted in 2013 by the Carex Working Group.

## Environmental Education Areas

The Klamath Falls Resource Area contains two Environmental Education Areas that total approximately 180 acres. Interpretive education uses at the Clover Creek and Surveyor Forest Environmental Education Areas receive substantial numbers of local visitors each year.

**Table 12.1 - Special Management Areas**

<u>Name of Area</u>	<u>Designation</u>	<u>Status</u>	<u>Acres</u>	<u>Management Plan</u>
Upper Klamath River	ACEC	Designated	5,700	In progress
Wood River Wetland	ACEC	Designated	3,200	Yes
Miller Canyon	ACEC	Designated	2,000	No
Yainax Butte	ACEC	Designated	720	No
Fourmile Creek	ACEC	Potential	1,196	No
Old Baldy	ACEC/RNA	Designated	520	No
Bumpheads	Special Botanical Area	Designated	50	No
Tunnel Creek	Special Botanical Area	Designated	280	No
Alkali Lake	Special Habitat Area	Designated	240	No
Clover Creek	Environmental Education Area	Designated	30	No
<u>Surveyor Forest</u>	Environmental Education Area	Designated	<u>150</u>	No
<b>TOTAL</b>			<b>14,086</b>	

## 13.0 Cultural Resources

The cultural resource program identifies and manages cultural resources on BLM administered lands. This program ensures that the BLM complies with federal laws governing cultural resources preservation and works with the State Historic Preservation Officer to enhance the management of cultural resources under the BLM's jurisdiction. Primary responsibilities include performing archaeological inventories prior to implementing projects with the potential to impact cultural resources, and consulting with Tribes as per Sections 106 and 110 of the National Historic Preservation Act (NHPA).

Surface inventories were conducted to BLM Class III standards. Class III inventory is a continuous, intensive survey of an entire target area by walking close interval transects (30 meters or less) until the area has been thoroughly examined, aimed at locating and recording all archaeological properties that have surface indication. In FY 2012, most projects are located in areas of previous Class III inventory, however, 3,097 acres of new inventory occurred.

A total of 48 newly discovered sites were documented, 115 sites were monitored and found to be in stable condition, and no sites were put forth for concurrence on their eligibility to the National Register of Historic Places by the Oregon State Historic Preservation Office. The history of inventory activities on the Resource Area is displayed in Table 13.1

**Table 13.1 - Cultural Resources Management - FY 2012**

	<u>FY 12</u>	<u>FY95-12</u>
Number of sites evaluated	0	9
Acres inventoried	3,097	133,605
Number of archaeological sites discovered	48	946
Sites nominated to National Registry of Historic Places	0	0
Sites monitored (since FY 06)	115	670

## 14.0 Visual Resources

Project proposals within the Klamath Falls Resource Area were reviewed to assure that proposed activities would meet designated visual resource management (VRM) classes.

## 15.0 Wildland Urban Interface Areas

In FY 2012, the BLM continued implementation of the Bly Mountain Wildland Urban Interface (WUI) project that started in FY 2010. The project consists of treating approximately 4,000 acres adjacent to Klamath Falls Forest Estates. Implementation of this project will take from four to ten years to complete. Treatments include thinning, piling and burning, utilization (chipping) of cut material and underburning. In 2010, the first 1,000 acres were treated, and in 2011 another 1,100 acres. In 2012, an additional 1,100 acres were treated with thinning and piling of material that was yarded to a landing, then chipped and utilized as biomass. Pile burning of hazardous fuels slash in WUI areas totaled 65 acres near the community of Keno, Oregon. All WUI projects are identified as priority areas in Community Wildfire Protection Plans.

## 16.0 Socioeconomic Conditions

The Klamath Falls Resource Area contributes to local, state, national and international economies through monetary payments, sustainable use of BLM-managed lands/resources, use of innovative contracting/implementation strategies, and providing amenities such as recreational facilities/opportunities and fish/wildlife habitat to enhance the local community as a place to live, work, and visit. The direction of BLM district 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.

### Monetary Payments

One of the ways the Bureau of Land Management contributes directly to local economies is through monetary payments including: Payments in Lieu of Taxes, O&C Payments, and Coos Bay Wagon Road (CBWR) Payments. Payments of each type, described below, were made in FY 2012 as directed in current legislation.

### 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 implementing 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 that the Federal government can fulfill its role of being a good neighbor to local communities. This is an especially important role for the BLM, which manages more public land than any other Federal agency. The specific amounts of PILT payments to counties in FY 2012 are displayed in Table 16.1.

### **Payments to Counties**

Payments to counties are currently made under “The Secure Rural Schools and Community Self-Determination Act of 2000.” The purpose of the act is “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.” For the purpose of this act, the “public domain lands managed by the BLM” refers to Oregon and California Revested Grant lands (O&C) and Coos Bay Wagon Road Lands (CBWR). The O&C lands include approximately 2.5 million acres of federally-owned forest lands in 18 western Oregon counties and 74,500 acres of Coos Bay Wagon Road Lands in the Coos Bay and Roseburg BLM Districts.

Fiscal Year 2012 was the 12th year that payments were made to western Oregon counties under the Secure Rural Schools and Community Self-Determination Act of 2000 (P.L. 106-393). Counties made elections to receive the standard O&C and CBWR payment as calculated under the Act of August 28, 1937 or the Act of May 24, 1939, or the calculated full payment amount as determined under P.L. 106-393. Klamath County elected to receive payments under the new legislation. Beginning in Fiscal Year 2001 and continuing through 2012 payments were made based on historic O&C payments to the counties. Table 16.2 displays the statewide payments made under each Title of P.L. 106-393 as well as the grand total.

Title I payments are made to the eligible counties based on the three highest payments to each county between the years 1986 and 1999. These payments may be used by the counties in the same manner as previous 50-percent and “safety net” payments.

Title II payments are reserved for 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 P.L. 106-393. BLM is directed to obligate these funds for projects selected by a local Resource Advisory Committee and approved by the Secretary of Interior or her designee.

Title III payments are made to the counties for uses authorized in P.L. 106-393. These include: 1) search, rescue, and emergency services on Federal land, 2) community service work camps, 3) easement purchases, 4) forest-related educational opportunities, 5) fire prevention and county planning, and 6) community forestry.

**Table 16.1 - Total Payments in Lieu of Taxes and Acres by County for FY 2012**

<b>County</b>	<b>Payment</b>	<b>Total Acres</b>	<b>BLM Acres</b>
Baker County	\$901,801	1,020,858	367,086
Benton County	\$24,951	73,460	56,573
Clackamas County	\$210,430	619,525	78,797
Clatsop County	\$12,964	1,397	42
Columbia County	\$27,047	10,961	10,961
Coos County	\$239,514	249,153	168,475

Crook County	\$318,989	939,136	496,009
Curry County	\$213,429	628,355	67,975
Deschutes County	\$730,983	1,431,258	457,698
Douglas County	\$569,310	1,676,191	667,379
Gilliam County	\$72,051	34,616	28,793
Grant County	\$595,159	1,752,209	171,211
Harney County	\$1,024,900	4,461,080	3,880,027
Hood River County	\$69,938	205,905	180
Jackson County	\$303,896	893,277	433,360
Jefferson County	\$268,925	297,088	27,268
Josephine County	\$238,427	701,953	312,228
<b>Klamath County</b>	<b>\$752,704</b>	<b>2,223,829</b>	<b>283,456</b>
Lake County	\$1,086,998	3,696,037	2,483,655
Lane County	\$592,557	1,744,558	291,731
Lincoln County	\$71,313	209,954	19,946
Linn County	\$190,824	561,806	87,655
Malheur County	\$2,392,940	4,299,134	4,260,283
Marion County	\$76,453	225,085	20,904
Morrow County	\$160,280	149,695	1,609
Multnomah County	\$27,291	80,345	4,208
Polk County	\$98,468	42,087	40,608
Sherman County	\$128,743	53,672	51,438
Tillamook County	\$44,580	131,247	48,312
Umatilla County	\$935,282	419,433	7,345
Union County	\$992,979	624,349	6,452
Wallowa County	\$398,508	1,170,218	18,207
Wasco County	\$75,303	221,700	45,824
Washington County	\$34,506	13,984	11,386
Wheeler County	\$102,553	301,927	131,498
Yamhill County	\$19,970	58,793	33,370
<b>Total</b>	<b>14,004,966</b>	<b>31,224,275</b>	<b>15,071,949</b>

**Table 16.2 - O&C Payments To Counties - FY 2012**

County	Payment To County Title I Paid	County Election Title II	Payment To County Title III Paid	O&C/ CWBR Grand Total
Benton	\$621,515.07	\$58,495.54	\$51,183.59	\$731,194.20
Clackamas	\$852,596.33	\$80,244.36	\$70,213.82	\$1,003,054.50
Columbia	\$574,441.56	\$54,065.09	\$47,306.95	\$675,813.60
Coos	\$1,892,927.48	\$334,046.03	\$0.00	\$2,226,973.50
Curry	\$1,162,829.07	\$109,442.74	\$95,762.39	\$1,368,034.20
Douglas	\$8,643,283.65	\$813,485.52	\$711,799.83	\$10,168,569.00
Jackson	\$4,398,143.36	\$776,142.95	\$0.00	\$5,174,286.30
Josephine	\$4,443,760.31	\$418,236.26	\$365,956.73	\$5,227,953.30
<b>Klamath</b>	<b>\$865,454.45</b>	<b>\$152,727.26</b>	<b>\$0.00</b>	<b>\$1,018,181.70</b>
Lane	\$4,229,794.40	\$398,098.30	\$348,336.01	\$4,976,228.70
Lincoln	\$103,143.42	\$18,201.78	\$0.00	\$121,345.20
Linn	\$997,469.73	\$93,879.50	\$82,144.57	\$1,173,493.80
Marion	\$417,654.05	\$39,308.62	\$34,395.04	\$491,357.70
Multnomah	\$200,641.14	\$18,883.87	\$16,523.39	\$236,048.40
Polk	\$723,901.14	\$68,131.87	\$59,615.39	\$851,648.40

Tillamook	\$177,444.05	\$31,313.66	\$0.00	\$208,757.70
Washington	\$114,584.76	\$20,220.84	\$0.00	\$134,805.60
Yamhill	\$219,895.43	\$0.00	\$38,805.08	\$258,700.50
<b>Total</b>	<b>\$30,639,479.36</b>	<b>\$3,484,924.16</b>	<b>\$1,992,042.78</b>	<b>\$36,046,446.30</b>

ASSUMPTIONS:

1 Pursuant to the Balanced Budget and Emergency Deficit Control Act, as amended, the Secure Rural Schools and Community Self Determination payments are subject to sequester. In order to be prepared if there is a sequestration, Interior took the prudent step to hold back 10 percent of the scheduled payments.

2 Includes acreage date for O&C Lands and Coos Bay Lands as updated October 5, 2012.

3 PCPI has been updated with 2011 data from BEA as released November 26, 2012.

4 Includes county payment allocation among titles as transmitted by the Oregon Governor on September 21, 2012.

## 17.0 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.

## 18.0 Recreation

Outdoor enthusiasts find a wide variety of recreation opportunities on the public lands managed by the Klamath Falls Field Office. Some of the more popular activities are camping, fishing, sightseeing, whitewater rafting, and birding. The resource area manages five campgrounds, a 3,200-acre wetland restoration project, river access points in the upper Klamath River canyon, and a number of dispersed, semi-developed camps.

The resource area issues and administers a number of Special Recreation Permits for activities such as guided whitewater rafting, guided hunting and fishing, and special events (Table 18.1).

**Table 18.1 - Recreation Statistics Fiscal Year 2012**

	<b>FY 2012</b>	<b>FY95-12(Total)</b>	<b>FY95-12 (Average)</b>
Number of Recreation Visits	125,300	2,658,800	147,300
Campground Permits Issued	1,414	25,801	1,433
Campground Fees Collected	\$8,715	\$171,243	\$9,513
Pavilion Use Permits Issued		Not Applicable	
Pavilion Use Fees Collected		Not Applicable	
Number of Special Recreation Permits	12	415	23
Special Recreation Permits Fees Collected	\$12,300	\$229,300	\$13,488
Total hours volunteered	5,280	125,854	6,992
Total value volunteer work	\$114,893	\$1,858,873	\$109,654

\*Value of volunteer hours are based on an hourly pay rate of \$21.76/hr.

## Recreation Pipeline Restoration Funds

This Congressional funding was appropriated for the completion of backlogged recreation projects in western Oregon, including BLM managed lands in Klamath County. The intent of this funding is to do facility or site backlog maintenance at existing recreation sites. New construction of recreation projects that address critical visitor safety or recreation management needs are also prioritized. During FY 2012, the thirteenth year of this funding, the Klamath Falls Resource Area received \$. Projects included, construction on the Gerber Horse Camp, replacement of aging and vandalized toilets, and construction and maintenance on the Gerber trail.

## Recreation Projects

### Gerber Recreation Site

#### FY 2012 Projects Completed

1. Completed 1.0 miles of construction on Potholes-Stan H. Springs trail.
2. Maintained 1.0 miles of Gerber-Potholes trail.
3. Constructed entrance kiosk and pay station at Horse Camp.
4. Replaced a vandalized vault toilet at Willow Valley Reservoir.

#### FY 2013 Projects Planned

1. Finish construction at the Horse Camp.
2. Design and install signage, and maintain 2.0 miles, of the Gerber trails.

### Wood River Wetland

#### FY 2012 Projects completed

1. Maintained existing trails and levee crossings.
2. Maintained and enhanced parking lot landscaping.
3. Renovation of entrance kiosk and installation of new three panel interpretive exhibit.

#### FY 2013 Projects Planned

1. Annual maintenance.
2. Crack repair, sealing, and partial repaving of entrance area and path.

### Upper Klamath River

#### FY 2012 Projects Completed

1. Maintained existing facilities.
2. Replaced a vault toilet at the Klamath River Campground.

#### FY 2013 Projects Planned

1. Continue to maintain existing facilities.
2. Continue to provide road maintenance to river access points.

### Topsy and Surveyor Recreation Sites

#### FY 2012 Projects Completed

1. Maintained existing facilities.

#### FY 2013 Projects Planned

1. Continue to maintain facilities.
2. Replace picnic tables.

# Recreation Fee Program

Prior to 1998, all recreation fees were combined with other revenue sources from public domain and O&C lands and allocated between the U.S. Department of the Interior and the O&C counties. Recreation facilities were wholly dependent on the funding provided through the Congressional appropriations process for operations and maintenance funding.

In March of 1998, The Klamath Falls Resource Area was added to the BLM-wide Recreation Fee Demonstration pilot program. This program allows the resource area to retain collected recreation fees to be used for maintenance of recreation sites and areas from which they were collected. A special account has been established for each recreation site and program.

The Association of O&C Counties supported the retention of all recreation fee revenues under the Fee Demonstration Pilot authority to help operate the BLM's recreation facilities and programs.

In FY 2012, a total of \$20,955 in fees were collected at the three participating recreation sites. The revenue from the Recreation Fee Program is used to fund visitor services and a number of minor maintenance projects associated with the recreation program. Fees generated from these recreation sites and applied to the program are shown in Table 18.2. Revenues collected each fiscal year are used to pay for projects in future years.

**Table 18.2 - Recreation Fee Program for Fiscal Year 2012**

<b>Recreation Fee Program</b>	<b>FY12 Revenue</b>	<b>FY12 Amount Invested Back Into Sites</b>	<b>Cumulative Revenue*</b>
Klamath River OR-14	\$12,240	\$15,000	\$182,240
Klamath Falls Resource Area OR-15 (Topsy and Gerber Campgrounds)	\$8,715	\$9,000	\$138,215
<b>Total Recreation Fee Demo Funds</b>	<b>\$20,955</b>	<b>\$24,000</b>	<b>\$325,455</b>

\* Since Year of Initiation (1998)

## Status of Recreation Plans

Pacific Crest National Scenic Trail Special Recreation Management Area (SRMA) - Recreation Area Management Plan to be coordinated by Medford District. Completed August of 1998.

Klamath River SRMA Plan to be evaluated, updated and incorporated into the Klamath River Management Plan - A draft river plan/environmental impact statement was released in April 2003. The final KRMP/EIS is on hold.

Klamath River Scenic Waterway Plan - The BLM and the State of Oregon signed a memorandum of understanding (12/31/97) for joint management of the Wild and Scenic River/State Scenic Waterway. A separate chapter of the Klamath River Management Plan/Environmental Impact Statement will address State Scenic Waterway issues. The administrative rules (management plan) for the Klamath River Scenic Waterway were adopted by the Oregon Parks and Recreation Department Commission on September 25, 2002 and became effective on October 3, 2002.

Hamaker Mountain SRMA - An analysis of recreation issues and projects were completed during the Topsy/Pokegema Landscape Analysis, July 1996 (OR #014-98-01). Further project planning is ongoing for future recreation project developments. Project implementation is contingent upon adequate funding.

Stukel Mountain SRMA - No recreation planning or watershed analysis has occurred. However, a local county advisory group (Stukel Road Task Force) completed a preliminary assessment of recreation issues in FY99. This information will be incorporated into future planning and project implementation. Project implementation is contingent upon adequate funding.

Site-specific planning for recreation pipeline restoration funding projects is ongoing at several facilities, including Gerber Recreation Site, Topsy Recreation Site, Swan Lake Rim Trail, and Wood River Wetland. The KFRA completed the joint planning effort with the Fremont-Winema National Forests to inventory all existing Off-Highway Vehicle trails and routes. This information will be used by the KFRA in future travel management planning efforts.

## **Volunteer Activities**

In FY 2012, volunteers contributed approximately 5,276 total hours of time and labor to nearly every resource program in the Klamath Falls Resource Area. Volunteers continue to provide substantial assistance to the recreation, wildlife, and cultural resources programs, as well as several of the resource area's community outreach events. Volunteer positions vary widely, ranging from summer campground hosting and park maintenance, to promoting International Migratory Bird Day, to monitoring wildlife in the winter. Approximately 68 individuals, including seven campground hosts, volunteered their efforts and services to the Klamath Falls Resource Area.

## **Tourism**

The BLM participates in The Answer People Group, an informal informational sharing group for front line public contact representatives from public service and private tourism related businesses.

# **19.0 Forest Management and Timber Resources**

The Klamath Falls Resource Area manages approximately 224,900 acres of land located in Klamath County. Approximately 51,230 acres of commercial forest land is located west of Klamath Falls and within the Northwest Forest Plan area. Approximately 23,550 acres (50%) of the commercial forest land on the Westside are available for timber harvest. On the Eastside, there are approximately 16,200 acres of commercial forest land of which approximately 8,800 acres (50%) are available for harvest. The Resource Management Plan provides for a sustainable timber harvest, known as the Allowable Sale Quantity (ASQ), from the Klamath Falls Resource Area. On the Westside, the ASQ is 5.91 MMBF (million board feet). On the Eastside, the ASQ is 0.40 MMBF.

## **Silvicultural Prescriptions**

To meet the ASQ commitment, the Klamath Falls Resource Area to date has primarily used two types of silvicultural treatments or prescriptions: Density Management and Mortality Salvage.

### **Density Management**

Density Management treatments are designed to improve or maintain forest health and are proactive efforts to improve stand resiliency by reducing stand densities and fuel loads. Density Management prescriptions generally involve thinning throughout all diameter classes

to promote forest health, uneven aged management and fire resiliency. Density management may also include thinning from below to reduce competition to under-represented species as well as to improve the resiliency of the large-tree component. Approximately 20-30 percent of the trees are generally removed under a Density Management prescription. Small (five acres or less) patch cuts may be included as part of the Density Management treatment. These are used in select areas to regenerate the less shade-tolerant and under-represented species (pines and Douglas-fir). Excess trees of sub-merchantable size are sometimes cut and removed concurrently, and logging slash is treated or removed, which significantly reduces wildfire hazard and prepares the site for prescribed burning.

## **Regeneration Harvests**

Per KFRA RMP guidelines, an average of 16-25 large green trees per acre are required to be left in Regeneration Harvest units. This prescription is primarily used in older stands, in decadent stands, and in stands where there is a need to initiate and/or enhance the development of seedlings and saplings in the understory while still maintaining an overstory component. In FY 2012, no acres of Regeneration Harvest were sold. Since the signing of the RMP, the KFRA has implemented approximately 259 acres of Regeneration Harvest.

## **Mortality Salvage**

The other primary type of harvest prescription, Mortality Salvage, is used to remove scattered dead and dying trees. As a result of continuing local insect infestations and high winds in localized areas, the Klamath Falls Resource Area is able to meet part of its ASQ by offering and negotiating salvage sales to capture the scattered mortality as needed. In FY 2012, the Klamath Falls Resource Area sold no mortality salvage.

## **Timber Sale Planning**

The timber sale process, including the planning, watershed analysis, environmental analysis, consultation, and the biological and cultural surveys, is a two to four year process. The public is given the opportunity to comment on proposals during the planning and scoping phase. Notices are printed in the local newspaper requesting comments during the environmental analysis period. In addition, when public tours are given, they are announced ahead of time. Once the layout, cruising, and appraisal is completed and the contract is prepared, the timber sale is ready to be offered and a final decision appears in the local newspaper stating when the sale will be auctioned. Below is a list of the tables that relate to the timber sale program:

Table 19.1	Timber Sale Volume and Timber Sale Acres - FY 2012
Table 19.2	Timber Volume Sold in fiscal year 2012
Table 19.3	Harvest Activity in FY 20121
Table 19.4	Timber Sales planned for fiscal year 2013 & 2014
Table 19.5	Status of all sold and awarded sales since signing of the RMP
Table 19.6	Summary of Volume Sold

## **Cumulative Status of Timber Sale Volume and Acres**

Refer to Table 19.1 for a summary, by land use allocation, of timber volume and acreage that has been harvested in the KFRA since October 1, 1994 (FY 1995). A similar table (M-3) in the Monitoring Report also compares the volume and acres with RMP/EIS assumed average and percent of assumed average. Discrepancies between actual treatments and assumed averages are discussed in the monitoring section. All KFRA Westside lands are in the Southern General Forest Management Area (SGFMA), described in the Northwest Forest Plan.

## FY 2012 Timber Sale Accomplishments

### Timber Sold in FY 2012

The Klamath Falls Resource Area offered and sold four sales in 2012; (PVJ, Spike, Wildgal, and Mid Spencer Timber Sales (Westside). Timber sale modifications to existing contracts were also executed. See Table 19.2 for total information on volume and value of timber sold.

### Harvest Activity in FY 2012

Harvest activity is shown in Table 19.3, including volume, acreage and value of timber. Additional information regarding juniper harvest and biomass removed can be found below in Table 19.1).

### Timber Sales Planned

The annual timber sale plan (Table 19.4) may be changed, altered, or amended by the authorized officer. See Table 19.4 for planned sales.

## Status of Sold/Awarded Klamath Falls RMP Timber Sales

Table 19.5 lists the status of Klamath Falls Resource Area sales that have been sold and awarded since signing of the RMP in June of 1995. The results from monitoring are discussed in the Monitoring Report, and Tables 19.6, 19.7, 19.8 and 19.9 summarize sale activity.

**Table 19.1 - Klamath Falls Timber Sale Volume (MBF) and Acres FY 2012**

Total MBF	Westside		Eastside		Combined	
	FY 2012	FY 95-12	FY 2012	FY 95-12	FY 2012	FY 95-12
Timber Sale Program	7,068	97,836	-81	7,545	6,988	105,380
Matrix Timber Sales	6,555	96,503	-81	7,438	6,475	103,940
All Reserves	513	1,333	0	107	513	1,440
Key Watersheds	4,356	59,321	0	0	4,356	59,321
Regeneration Harvests	3	5,731	0	0	3	5,731
Density Management	6,550	68,549	-81	5,622	6,469	74,171
Mortality Salvage	0	19,253	0	1,606	0	20,859
Small Sales (Regulated)	0	80	0	74	0	154
R/W Clearing	3	146	0	72	3	218
Unmapped LSRs	365	387	0	0	365	387
Riparian Reserves	148	563	0	51	148	614
Total Admin Withdrawal	0	84	0	56	0	140
Forested Stewardship - Regulated	0	2,744	0	64	0	2,808
Forested Stewardship - Non-Reg.	0	299	0	0	0	299
Juniper Sawlog Volume (MBF)	0	0	0	1,576	0	1,576
Juniper Sawlog Volume (Tons)	0	0	1,701	1,701	1,701	1,701
Stew. Biomass - Hog Fuel (tons)	8,533	28,912	9,654	19,827	18,187	48,739
Stewardship Clean Chip Vol. (tons)	0	3,628	6,676	22,041	6,676	25,669

Total Acres	Westside		Eastside		Combined	
	FY 2012	FY 95-12	FY 2012	FY 95-12	FY 2012	FY 95-12
Timber Sale Program	2,500	26,840	0	4,655	2,500	31,495
Matrix Timber Sales	2,351	26,404	0	4,574	2,351	30,978
All Reserves	149	436	0	41	149	477
Key Watersheds	1,162	13,544	0	0	1,162	13,544
Regeneration Harvests	1	260	0	0	1	260
Density Management	2,349	17,510	0	3,319	2,349	20,829
Mortality Salvage	0	7,438	0	1,154	0	8,592

Small Sales (Regulated)	0	1	0	20	0	21
R/W Clearing	1	5	0	31	1	36
Unmapped LSRs	96	98	0	0	96	98
Riparian Reserves	53	180	0	39	53	219
Total Admin Withdrawal	0	50	0	2	0	52
Forested Stewardship - Regulated	0	1,190	0	50	0	1,240
Juniper Sawlog Volume Acres Yarded	0	108	0	0	0	108
Stewardship Biomass Hog Fuel						
Volume Acres Yarded	0	0	0	1,212	0	1,212
Stewardship Clean Chip Volume						
Acres Yarded	0	162	0	386	0	548
Stewardship Biomass Volume Acres						
Yarded	0	435	0	2,429	0	2,864
	0	0	4,226	4,226	4,226	4,226

**Table 19.2 - Timber Volume Sold in FY 2012**

<u>Name</u>	<u>Acres</u>	<u>Volume (MMBF)</u>	<u>Value</u>
Replacement Gal	2,498	7,308	\$274,393.19
<b>Modifications to Existing Sales</b>	<b>0</b>	<b>-0.326</b>	<b>\$(84,001.64)</b>
<b>Total Forested Areas</b>	<b>2,498</b>	<b>6.981.9</b>	<b>\$190,391.55</b>

**Non-BLM Volume Sold**

none 2012

**Table 19.3 - Harvest Activity for FY 2012**

<b>TS Contract</b>			<b>Volume Yarded</b>	
<u>Number</u>	<u>Sale Name</u>	<u>Harvest Acres</u>	<u>(MMBF)</u>	<u>Value</u>
ORL04-TS-8-2	Buck 13	0	-0.016	-\$16.00
ORL04-TS-10-2	Onion CPrings	315	1.899	\$172,378.00
ORL04-TS-11-2	Replacement Gal	185	1.392	\$100,871.65
ORL04-TS-9-3	Brady's Boot	91	0.091	\$1,566.72
<b>Totals</b>		<b>591</b>	<b>3.367</b>	<b>\$274,800.37</b>

**Table 19.4 – Planned Timber Sales (FY 2013)**

<u>FY</u>	<u>Sale Name</u>	<u>Location</u>	<u>W/E</u>	<u>Date</u>	<u>MMBF</u>	<u>Acres</u>	<u>Harvest Rx</u>
13	Adobe West	T40S, R14.5E, Secs. 1,2,11,12	E	2012	2.4	1,216	DM
13	Slippery Topsy	T40S, R6E, Secs. 1, 12, 35	W	2013	3	1,556	DM
		T40S, R7E, Secs. 7, 17, 21, 29					
13	Slipping South	T40S, R7E, Secs. 35	W	2012	1	483	DM
		T41SW, R7E, Secs 3, 11					

Notes: The sales listed above do not include small negotiated sales such as Right-of-Ways.

W/E : W = Westside Sale (West of Klamath Falls) E = Eastside Sale (East of Klamath Falls)

DM = Density Management sales are designed primarily to improve forest health conditions. Silvicultural prescriptions are written to maintain uneven aged stands and also maintain and improve the health and resiliency of primarily the shade intolerant species: ponderosa pine, sugar pine and Douglas-fir. They are also designed to reduce stand densities, fuel loads, and risk of stand replacing wildfires.

MS = Mortality Salvage sales are designed to capture the immediate but scattered mortality (dead or dying trees) occurring over the Resource Area. This primarily involves only the removal of the recent mortality within the stand. Normally, less than 10% of the volume removed is live trees in the mortality salvage sales. Some thinning does occur beneath the old growth pines. Failure to remove the immediate mortality results in wood deterioration and complete loss of commercial value within approximately two years.

UR = Understory Reduction - Part of the objective of the sale is to reduce the density of primarily submerchantable (3"-7" diameter) shade tolerant species in the understory to reduce fire risk and ladder fuels as well as to enhance health of overstory trees.

RH = Regeneration Harvest - Designed primarily to initiate and to enhance the development of seedlings and saplings in the understory while still maintaining an overstory component. Per KFRA RMP requirements, of an average of 16-25 large green trees per acre will be left in Regeneration Harvest Units.

**Table 19.5 – Status of Sold and Awarded Timber Sales**

FY	Sale Name (Area)*	Location	Date	MMBF	Acres	Rx**	Complete(FY)
1995	Frosty One (W)	Upper Johnson Creek Area	9/95	2.8	829	DM/UR	100% (1995)
1996	Too Frosty (W)	Upper Johnson Creek Area	1/96	2.5	459	DM/UR	100% (1997)
1996	West Rome 1 Salvage (W)	KFRA Lands North of HWY 66	6/96	3.0	2,000	MS	100%
1997	Lower Spencer Salvage (W)	KFRA Lands North of HWY 66	12/96	2.5	2,000	MS	100% (1998)
1997	West Rome II Salvage (W)	KFRA Lands North of HWY 66	12/96	2.0	1,500	MS	100%
1997	Stukel Mountain (E)	Stukel Mountain Area	6/97	0.30	300	DM	100% (2000)
1997	SKB Neg. Salvage (W)	Blowdown - Buck Mountain	6/97	0.05	50	MS	100%
1998	Kakapo Stew (W)	Lower Spencer Creek Area	12/97	2.0	397	DM/UR	100% (1999)
1998	Grenada East (W)	S. of HWY 66 – W. of Hamaker Mt.	7/98	2.5	1,300	DM/UR	100% (2001)
1998	STH Neg. Salvage (W)	Blowdown - Burton Flat Area	9/98	0.05	50	MS	100%
1999	Bly Mountain (E)	Klamath Forest Estates	7/99	1.06	646	DM	100% (2004)
2000	Muddy Tom (W)	S. of HWY 66 - W. of Klam Riv Can	6/00	4.6	1,873	DM/UR	100% (2006)
2000	Clover Hookup (W)	N. of HWY 66 - Low Spencer Ck	8/00	2.8	944	DM/UR/RH	100% (2002)
2001	Grenada West (W)	S. of HWY 66 – E. of Klam Riv Can	8/01	2.6	1,003	DM	100% (2000)
2002	Slim Chicken (W)	S. of HWY 66 – E. of Klam Riv Can	7/02	3.97	2,113	DM	100% (2000)
2002	Saddled Again (W)	N. of HWY 66	8/02	4.0	570	DM/RH	100% (2007)
2002	Sinking Salvage (W)	N. of HWY 66	8/02	0.04	5	MS	100%
2003	Rattlesnake Negotiated (E)	Yonna Valley	10/02	0.101	48	DM	100% (2002)
2003	Surveyor (W)	N. of HWY 66	9/03	9.58	406	DM/RH	100% (2000)
2003	Whiteline Redone (E)	Swan Lake Rim Area	6/03	0.573	278	DM	100%
2003	Toolbox Salvage (E)	Silver Lake Area (Lakeview RA)	6/03	0.344	109	MS	100%
2003	Boundary Spr. Juniper (E)	Gerber Block	8/03	0.79	366	MS	100%
2004	Matchbox (W)	S. of HWY 66	9/04	0.8	287	DM	100%
2004	Baldy Salvage (W)	N. of HWY 66	7/04	1.5	250	MS	100% (2006)
2004	Stateline Neg. Salvage (E)	Gerber Block	6/04	0.1	50	MS	100%
2004	Gerber Chips (Juniper) (E)	Gerber Block	7/04	0.6	1,000	MS	100%
2005	CHEW (W)	S. of Hwy 66	8/05	2.9	1,156	DM/RH	100% (2003)
2005	Adobe East (E)	Gerber Block	12/05	2.5	1,400	DM	100% (2009)
2005	Twenty-one Juniper (E)	Gerber Block	8/05	0.09	90	MS	100%
2006	Walter's Plant. Neg. Sale (W)	N. of Hwy 66	10/05	0.254	66	DM	100% (2006)
2006	Walter's Cabin (W)	N. of Hwy 66	8/06	1.961	578	DM	100% (2008)
2007	Thin Sheep (W)	N. of Hwy 66	11/06	3.259	590	DM/RH	100% (2007)
2007	Pleasant Val. Neg. Salv. (W)	S. of Hwy 66	9/07	0.095	115	MS	0%
2008	PVJ (W)	S. of Hwy 66	8/08	1.268	793	DM	cancelled N/A
2008	Buck 13 (W)	N. of Hwy 66	9/08	0.535	28	DM/RH	100% (2011)
2008	Buck 15 (W)	N. of Hwy 66	5/08	2.921	467	DM/RH/	MS 100% (2010)
2009	Buck 23 (W)	N. of Hwy 66	11/08	3.056	379	DM	100% (2011)
2009	Brady's Boot (E)	Gerber Block	9/09	0.561	551	DM	100% (2011)
2010	Cold Creek (W)	N. of Hwy 66	12/09	2.757	507	DM/UR	100% (2011)
2010	Onion Sprints (W)	N. of Hwy 66	9/10	2.649	433	DM/UR	90% (2012)
2011	Replacement Gal (W)	N. of Hwy 66	9/11	1.714	239	DM/UR	75% (2012)
2012	PVJ (W)	S. of Hwy 66	7/12	1.266	790	DM/UR	0%
2012	Spike (W)	N. of Hwy 66	5/12	0.603	327	DM	0%
2012	Wildgal (W)	S. of Hwy 66	5/12	1.466	546	DM/UR	0%
2012	Mid Spencer (W)	N. of Hwy 66	9/12	2/791	635	DM/UR	0%
<b>Non BLM Sales</b>							
1998	USFWS Bear Valley (W)	Bear Valley Wildlife Refuge	6/97	1.0	245	DM/UR	100% (2000)
2003	USFWS Bear Valley 2 (W)	Bear Valley Wildlife Refuge	6/03	2.6	1,040	DM	100% (2006)
2010	USFWS Bear Valley 3 (W)	Bear Valley Wildlife Refuge	12/09	1.376	400	DM/UR	100% (2012)

NOTES: The sales listed above do not include small, negotiated sales such as Right-of-Ways.

\*W = Westside Sale (West of Klamath Falls). E = Eastside Sale (East of Klamath Falls).

\*\* Prescription (Rx) abbreviations as follows:

DM = Density Management, MS = Mortality Salvage, UR = Understory Reduction, RH = Regeneration Harvest

USFWS – Bear Valley – Timber sales within the Bear Valley National Wildlife Refuge. These sales were designed to maintain and improve forest health within the refuge by thinning overstocked stands, to thin understory trees beneath eagle roosting trees, and also to reduce fuel loads and risk of stand replacement wildfires.

**Table 19.6 - Summary of Volume Sold**

	FY 2012		FY 95-12		18 Year Projection	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
<b>Sold (MMBF)</b>						
ASQ Volume (Harvest Land Base)	6.56	-0.08	96.50	7.44	106.38	7.20
Non-ASQ Volume (Reserves)	0.51	0.00	1.33	0.11	0.00	0.00
<b>TOTAL</b>	<b>7.07</b>	<b>-0.08</b>	<b>97.84</b>	<b>7.54</b>	<b>106.38</b>	<b>7.20</b>
<b>Sold (Unawarded as of 9/30/11)</b>						
ASQ Volume (Harvest Land Base)	0.00	0.00	0.00	0.00		
Non-ASQ Volume (Reserves)	0.00	0.00	0.00	0.00		
<b>TOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		

**Table 19.7 - Volume and Acres Sold by Allocations**

	FY 2012		FY 95-12		18 Year Projection	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
<b>ASQ Volume -MMBF (Harvest Land Base)</b>						
Matrix	6.56	-0.08	96.50	7.44	106.38	7.20
Adaptive Mgmt Area	NA	NA	NA	NA	NA	NA
<b>ASQ Acres (Harvest Land Base)</b>						
Matrix	2,351	0	26,404	4,574	17,262	4,842
Adaptive Mgmt Area	NA	NA	NA	NA	NA	NA
<b>ASQ Volume -MMBF (Key Watersheds)</b>						
Key Watersheds	4.36	NA	59.32	NA	54.54	NA

**Table 19.8 - Timber Sales Sold by Harvest Types**

	FY 2012		FY 95-12		18 Year Projection	
	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
<b>ASQ Volume -MMBF (Harvest Land Base)</b>						
Regeneration Harvest	0.00	0.00	5.73	0.00	34.20	0.0
Commercial Thinning & Density Management	6.55	-0.08	68.55	5.62	72.36	7.20
Stewardship	0.00	0.00	2.74	0.06	0.00	0.0
Other (Mortality Salvage)	0.00	0.00	19.48	1.75	0.00	0.0
<b>TOTAL</b>	<b>6.56</b>	<b>-0.08</b>	<b>96.50</b>	<b>7.44</b>	<b>106.38</b>	<b>7.20</b>
<b>ASQ Acres (Harvest Land Base)</b>						
Regeneration Harvest	1	0	260	0	2,358	594
Commercial Thinning & Density Management	2,349	0	17,510	3,319	14,904	4,842
Stewardship	0	0	1,190	50	0	0
Other (Mortality Salvage, small sales, R/W)	1	0	7,443	1,205	0	0
<b>TOTAL</b>	<b>2,351</b>	<b>0</b>	<b>26,404</b>	<b>4,574</b>	<b>17,262</b>	<b>5,346</b>
<b>Reserve Acres</b>						
Late Successional Reserves	96	0	98	0	NA	NA
Riparian Reserves	53	0	180	39	NA	NA
Other Withdrawn Land*	0	0	158	2	NA	up to 1000 ac/yr
<b>TOTAL</b>	<b>149</b>	<b>0</b>	<b>436</b>	<b>41</b>	<b>NA</b>	<b>NA</b>

\*Includes Stewardship and Western Juniper Woodlands

**Table 19.9 - Timber Sale Acres Sold by Age Class**

(Harvest Land Base)	FY 2012		FY 95-12		18 Year Projection (95-12)	
<u>Regeneration Harvest</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
0 - 70 Years	0	0	0	0	986	0
80 - 140 Years	0	0	76	3	756	0
150 - 190 Years	0	0	53	0	156	0
<u>200+ Years</u>	<u>0</u>	<u>0</u>	<u>130</u>	<u>2</u>	<u>328</u>	<u>0</u>
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>259</b>	<b>5</b>	<b>2,227</b>	<b>0</b>
<b>Density Management</b>						
<u>&amp; Commercial Thinning</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
0 - 70 Years	970	0	5,272	766	3,809	1,248
80-140 Years	723	0	8,144	1,970	6,488	2,457
150 - 190 Years	59	0	1,646	579	1,941	868
<u>200+ Years</u>	<u>150</u>	<u>0</u>	<u>2,932</u>	<u>0</u>	<u>1,836</u>	<u>0</u>
<b>TOTAL</b>	<b>1,902</b>	<b>0</b>	<b>17,994</b>	<b>3,315</b>	<b>14,073</b>	<b>4,573</b>
<b>Mortality Salvage</b>						
<u>&amp; Other</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>	<u>West</u>	<u>East</u>
0 - 70 Years	0	0	1,512	270	0	0
80 - 140 Years	0	0	3,654	630	0	0
150 - 190 Years	0	0	842	190	0	0
<u>200+ Years</u>	<u>0</u>	<u>0</u>	<u>731</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>6,739</b>	<b>1,090</b>	<b>0</b>	<b>0</b>

## Forest Development Activities

Data on Forest Development Activities are displayed in Table 19.10. Overall, for the first eighteen years of the KFRA RMP, silvicultural treatments have focused on salvaging drought-related mortality and windthrow, and thinning overstocked stands. This forest health-driven prescription has resulted in fewer regeneration cuts than projected and a reduced need for associated reforestation and development treatments that would follow.

### Brushfield Conversion

In the RMP, no conversion acreage was identified for commercial forest lands.. This is not expected to be a common treatment.

### Site Preparation

Projected levels of this treatment have been low over this time period as a result of the emphasis on thinning for forest health, as opposed to regeneration harvesting.

### Planting (regular stock)

This fiscal year, trees were planted on 355 acres on O&C lands and brush was planted on 540 acres of public domain lands. Planting is 43% of projected levels on the Westside and 136% on the eastside.

### Planting (improved stock)

No improved stock has been used to date. Potentially available stock is sugar pine and white pine, and possibly ponderosa pine and lodgepole pine from private sources. The use of genetically improved stock is expected to be well below projected levels, due to the smaller planting program.

## Vegetation Control

This includes vegetation control treatments like brush cutting, grass grubbing, and paper mulching of seedlings.

## Precommercial Thinning (PCT)

Depending upon funding, westside PCT treatments could continue to exceed projected levels.

## Restoration Thinning/Understory Reduction

These treatments have usually been performed as part of timber sale operations or as part of fuels reduction treatments in commercial forest stands. Understory treatment benefits include reduced fuel loads and improved forest health. Treatment needs are expected to continue at previous levels on the Westside, while Eastside treatments are expected to increase.

## Fertilization

To date, no fertilization treatments have been implemented on either side of the resource area. The small areas projected for the decade could be done under one service contract.

## Animal Damage Control

On the KFRA, animal damage control is usually pocket gopher control. Limited regeneration harvests have reduced the need for these treatments. In addition, many older plantations are growing in size and are less vulnerable to gopher damage. In 1995, 113 acres of animal damage control was conducted, and in 1997, 904 acres. No animal damage control has been done since 1997.

**Table 19.10 - Forest Development Activities**

### Entire Resource Area

Activity (Acres)	FY 12	Totals to Date	Average Annual	Projected Annual	Accomplishments (% of Projected)
Brushfield Conversion	39	147	9	0	0%
Site preparation	281	746	47	250	19%
Planting (regular stock)	186	3578	224	360	62%
Planting (improved stock)	0	0	0	115	0%
Vegetation Control	0	3284	205	225	91%
Precommercial Thinning	590	4069	254	70	363%
Restoration Thin/Understory Reduction	339	11447	715	440	163%
Pruning	0	650	41	29	140%
Fertilization	0	0	0	32	0%
Reforestation Surveys	100	32976	2061	N/A	N/A
Animal Damage Control	0	1017	64	415	15%
Oak Woodland Thinning	0	772	48	N/A	N/A

### Westside

Activity (Acres)	FY 12	Totals to Date	Average Annual	Projected Annual	Accomplishments (% of Projected)
Brushfield Conversion	39	147	9	0	N/A
Site preparation	281	677	42	180	24%
Planting (regular stock)	186	2262	141	300	47%
Planting (improved stock)	0	0	0	100	0%
Vegetation Control	0	2925	183	200	91%
Precommercial Thinning	590	3346	209	50	418%
Restoration Thin/Understory Reduction	339	9514	595	290	205%
Pruning	0	700	44	16	273%
Fertilization	0	0	0	32	0%
Reforestation Surveys	100	26939	1684	N/A	N/A
Animal Damage Control	0	992	62	400	16%
Oak Woodland Thinning	0	772	48	N/A	N/A

**Eastside**

<b>Activity (Acres)</b>	<b>FY 12</b>	<b>Totals to Date</b>	<b>Average Annual</b>	<b>Projected Annual</b>	<b>Accomplishments (% of Projected)</b>
Brushfield Conversion	0	0	0	0	0%
Site preparation	0	69	4	70	6%
Planting (regular stock)	0	1305	82	60	136%
Planting (improved stock)	0	0	0	15	0%
Vegetation Control	0	359	22	25	90%
Precommercial Thinning	0	330	21	20	103%
Restoration Thin/Understory Reduction	0	1933	121	150	81%
Pruning	0	0	0	13	0%
Fertilization	0	0	0	N/A	N/A
Reforestation Surveys	0	5214	326	N/A	N/A
Animal Damage Control	0	25	2	15	10%
Oak Woodland Thinning		(No oak on the Eastside.)			

## Stewardship Contracting

The BLM received Stewardship Contracting authority in 2003 under Section 323 of Public Law 108-7. The legislation authorizes trading goods for services and multi-year contract authority greater than five years but not to exceed ten years. The BLM is authorized to enter into contracts or agreements for services to achieve land management goals as well as meet local and rural community needs. A source for performance under a contract must be selected on a best value basis. When designing stewardship projects, the BLM is directed to consider projects that will involve treatments and techniques available to make forests, woodlands, and rangelands more resilient to natural disturbances such as fire, insects, disease, wind, and flood. Stewardship contracting projects are to be designed to accomplish one or more of the goals noted below:

- Road and trail maintenance or obliteration for improved water quality;
- Soil productivity, habitat for wildlife and fisheries, or other resource values;
- Setting of prescribed fires to improve composition, structure, condition, and health of stands or to improve wildlife habitat;
- Removing vegetation or other activities to promote healthy forest stands, reduce fire hazards or achieve other land management objectives;
- Watershed restoration and maintenance;
- Restoration and maintenance of wildlife and fish habitat; and
- Control of noxious and exotic weeds and reestablishing native plant species.

In FY 2004, the KFRA awarded the Gerber Stew Stewardship Contract to Quicksilver Contracting. The contract was designed as a long-term contract to implement up to 10,000 acres of primarily restoration treatments on forest land, juniper woodlands, rangelands, riparian areas, and roads. This contract is designed to treat BLM administered lands in the KFRA that meet the appropriate criteria over the next ten years. Since 2004, the KFRA has issued 27 task orders.

In 2010, The KFRA awarded a second stewardship contract, Klamath Stewardship, to two contractors, Quicksilver Contracting and Ore-Cal Land Development, LLC. The objectives of this contract are to reduce the risk of high intensity wildland fire to life, property, and natural resources on lands managed by the BLM Lakeview District and to improve forests and rangelands through stand density reduction, removal of encroaching western juniper, and reduction of hazardous fuel loads. A secondary objective of this contract was to provide a means to spend ARRA funding awarded to the district. This year, six task orders were issued.

A summary of the status of stewardship task orders is shown Table 19.11.

**Table 19.11 - Stewardship Contract Summary**

Gerber Stew	Tasked to Date		Completed to Date		
	Units	Cost	Units	Cost	
Pruning (acres)	270	\$38,580.30	270	\$38,580.00	
Manual Precomm. Thin (acres)	2,220	\$163,351.72	2,220	\$163,351.72	
Manual Cut/Pile/Cover (acres)	268	\$135,742.00	265	\$133,942.00	
Mechanical Cut/Pile (acres)	3,579	\$773,441.02	3,297	\$719,585.89	
Yarding (acres)	4,350	\$394,203.00	3,868	\$347,874.35	
Biomass Removal (tons)	40,056	\$955,676.03	32,178	\$761,937.16	
Tube Removal (acres)	406	\$13,951.37	406	\$13,951.37	
New Fence or Repair (feet)	6,800	\$5,344.00	5,295	\$4,094.85	
Seeding (acres)	2,128	\$33,191.00	1,903	\$30,000.96	
<b>Total Vegetation Treatment</b>		<b>\$2,513,480.44</b>		<b>\$2,213,318.30</b>	
Temp. Road Const. (stations)	226	\$5,019.78	80	\$1,680.00	
Road Maintenance (stations)	2,600	\$21,290.60	2,230	\$18,185.20	
Road Obliteration (stations)	115	\$1,037.30	115	\$1,037.30	
Road Barricading (# of roads)	10	\$1,650.00	9	\$1,485.00	
Spot Rocking (tons)	5,623	\$185,455.56	5056	\$161,925.37	
Spot Rocking (station)	221	\$111,865.00	171	\$109,440.00	
Miscellaneous Road Work		\$34,118		\$31,217.98	
<b>Total Road Treatment</b>		<b>\$345,614.36</b>		<b>\$317,523.68</b>	
<b>Products</b>					<b>Cost of Production</b>
Sawlogs (MBF)	850	\$24,787.31	321	\$10,147.00	\$0
Clean Chips - Biomass (tons)	34,999	\$77,739.48	32,272	\$76,543.66	\$0
Hog Fuel - Biomass (tons)	40,156	\$227,110.45	32,178	\$174,111.70	\$761,937

Klamath	Tasked to Date		Completed to Date		
	Units	Cost	Units	Cost	
Pruning (acres)	0	\$0.00	0	\$0.00	
Manual Cut (acres)	1035	\$68,440.00	1035	\$68,440.00	
Hand Pile and Cover (acres)	30	\$12,096.00	30	\$12,096.00	
Mechanical Cut or Cut/Pile(acres)	2270	\$415,954.80	2030	\$371,736.60	
Yarding (acres)	6743	\$900,611.77	5213	\$719,578.12	
Mechanical brushing (acres)	527	\$184,450.00	294	\$102,900.00	
Tube Removal (acres)	0	\$0.00	0	\$0.00	
Manual brushing(acres)	120	\$45,360.00	120	\$45,360.00	
Seeding (acres)	3485	\$107,305.00	3392	\$104,509.00	
Biomass Removal (tons)	19563	\$542,013.00	11311	\$339,414.70	
Firewood/Posts Removal (cfs/tons)	0	\$0.00	0	\$0.00	
<b>Total Vegetation Treatment</b>		<b>\$2,276,230.57</b>		<b>\$1,764,034.42</b>	
Temp. Road Const. (stations)	268	\$13,824.00	72	\$3,240.00	
Road Maintenance (miles)	81.9	\$48,979.40	24.4	\$14,636.00	
Road Obliteration (stations)	28	\$476.00	14	\$280.00	
Road Barricading (# of roads)	3	\$512.23	0	\$0.00	
Spot Rocking (tons)	1475	\$38,336.00	1424.43	\$36,784.82	
Miscellaneous Road Work	710	\$13,192.00	210	\$4,452.00	
<b>Total Road Treatment</b>		<b>\$115,319.63</b>		<b>\$59,392.82</b>	
<b>Products</b>					<b>Cost of Production</b>
Sawlogs (MBF)	840	\$8,632.50	792	\$7,920.00	\$0
Sawlogs (Tons)	1,701	\$5,103.00	1701	\$5,103.00	\$0
Clean Chips - Biomass (tons)	18,465	\$25,046.25	6765.84	\$8,457.30	\$0
Hog Fuel - Biomass (tons)	20,813	\$310.68	11311.03	\$113.11	\$339,414.70
Firewood/Posts (cfs)	0	\$0.00	0	\$0.00	\$0

## 20.0 Special Forest Products

The district sold a variety of special forest products as shown in Table 20.1. The more popular special forest products sold are firewood, Christmas trees, and boughs. In FY 2012, 532 permits were issued for a total receipt value of \$12,504. The sales follow the guidelines contained in the Oregon/Washington Special Forest Products Procedure Handbook.

**Table 20.1 - Special Forest Products Fiscal Year 2012\***

Product	WESTSIDE		EASTSIDE		COMBINED	
	FY2012	FY95-12	FY2012	FY95-12	FY2011	FY95-12
<b>Boughs, coniferous</b>						
Contracts (#)	1	16	1	2		
Amount (lbs)	750	12,520	75,000	75,750		
Value (\$)	\$15	\$256	\$2,250	\$2,265		
<b>Christmas trees</b>						
Contracts (#)	85	882	0	15	85	897
Amount (#)	85.00	1187	0	20	85	1207
Value (\$)	\$535.00	\$5,984	\$0	\$99	\$535	\$6,083
<b>Seed and seed cones</b>						
Contracts (#)	0	11	0	11	0	22
Amount (bushels)	0	1,956	0	1,660	0	3,616
Value (\$)	\$0	\$185	\$0	\$452	\$0	\$637
<b>Mosses - Bryophytes</b>						
Contracts (#)	0	1	0	1	0	2
Amount (lbs)	0	16	0	20	0	36
Value (\$)	\$0	\$14	\$0	\$10	\$0	\$24
<b>Mushrooms - Fungi</b>						
Contracts (#)	22	226	0	8	22	234
Amount (lbs)	1,040	11,550	0	980	1,040	12,530
Value (\$)	\$300	\$2,830	\$0	\$1,70	\$300	\$3,000
<b>Transplants</b>						
Contracts (#)	0	7	0	5	0	12
Amount (#)	0	284	0	686	0	970
Value (\$)	\$0	\$91	\$0	\$93	\$00	\$184
<b>Floral &amp; Greenery</b>						
Contracts (#)	0	1	0	1	0	2
Amount (lbs)	0	10	0	1	0	11
Value (\$)	\$0	\$10	\$0	\$10	\$0	\$20
<b>Wood products /firewood</b>						
Contracts (#)	75	1082	345	2771	420	3853
Amount (cubic feet)	20,864	289,016	106,991	742,960	127,855	1,031,976
Value (\$)	\$1,280	\$19,152	\$6,599	\$43,059	\$7,879	\$62,211
<b>Small Sales Biomass</b>						
Contracts (#)	2	5	1	1	3	6
Amount (tons)	3000	7396	252	252	3252	7648
Value (\$)	\$1,500	\$11,275	\$25	\$25	\$1,525	\$11,300
<b>Total Contracts (#)</b>	<b>185</b>	<b>2,231</b>	<b>347</b>	<b>2,845</b>	<b>532</b>	<b>5,076</b>
<b>Total Value (\$)</b>	<b>\$3,630</b>	<b>\$39,797</b>	<b>\$8,874</b>	<b>\$64,159</b>	<b>\$12,504</b>	<b>\$103,955</b>

\*Figures represent district-wide sales of special forest products.

## 21.0 Energy and Minerals

There were no mining plans of operations, mining claims, or mining or energy notices submitted during FY 2012. There are no leases of oil, gas or geothermal resources within the Klamath Falls Resource Area, although there are several known geothermal resource areas and most of the public lands are prospectively valuable for oil and gas. The Resource Area has approved permits for wind monitoring test sites for the purpose of assessing wind energy potential. In FY 2012, the resource area had no sales of mineral materials (cinders and gravel) to individuals. Refer to Table 21.1 for Energy and Minerals program information.

**Table 21.1 - Energy and Minerals Management - FY 2012**

	<u>FY 2012</u>	<u>FY 95-12</u>
Total Mining Claims	1	2
New mining claims	0	0
Mining claims submitted	0	1
Mining claim compliance inspection	0	4
Noncompliance notices issued	0	1
Abandoned mines removed	0	0
Community pit inspections	0	14
Permits issued for mineral removal	0	87
Total Oil leases	0	0
Total Gas leases	0	0
Total Geothermal leases	0	0
Total Wind Energy Leases	0	0
Total Solar Energy Leases	0	0

## 22.0 Land Tenure Adjustments

Since completion of the RMP, 3,056.75 acres have been sold (see Table 22.1). The land was sold to offset losses to Klamath County's tax base that resulted from the Wood River Wetland acquisition.

Since the RMP was completed, 1,160 acres originally identified for sale have been re-evaluated and determined suitable for disposal only by exchange. An additional 5,680 acres originally evaluated for sale was determined appropriate to be retained in Federal ownership. Resource values, including, but not limited to, wildlife habitat, timber, and cultural resources found on these lands justify retention in public ownership. In a plan amendment, Appendix I was updated to reflect the work accomplished over the first four years in evaluating public lands for sale or exchange.

Public Law 105-321 requires that, when selling, purchasing and exchanging land, the Bureau of Land Management may neither, 1) reduce the total acres of O&C or CBWR lands, nor 2) reduce the number of O&C, CBWR, and Public Domain lands that are available for timber harvest below what existed on October 30, 1998. Since 1996, we have sold approximately eight acres of public domain "timberland" in order to address unintentional trespass and other land and access situations. To date, there have been no opportunities to acquire timberland to replace these acres.

**Table 22.1 - Land Use Tenure Adjustments Fiscal Year 2012**

	<u>FY 2012</u>	<u>FY 95-12</u>
Amount of land acquired (acres)	0	0
Amount of land exchanged (acres)	0	120
Amount of land sold (acres)	0	3,056.75
Amount of land easement acquired (#/acres)	0	4/7.71
Leases/permits issued (number)	0	6
Unauthorized uses identified/resolved, (number/number)	1/0	20/18
Withdrawals completed (number/acres)	0	1/1
Withdrawals revoked (number/acres)	0	11/11,281

## 23.0 Access and Rights-of-Way

The summary table in the front of this document summarizes some of the various realty actions that have been accomplished. Applications for rights-of-way have been received and processed at a moderate and consistent rate. New authorizations include commercial use of existing roads to haul timber and other forest products, communications sites, access to private lands, power lines, and wind generator test sites. There have been inquiries and interest in solar, geothermal, and hydro-electric pump storage projects on the KFRA. Road and utility rights-of-way applications for solar and geothermal projects and/or road access supporting these projects are expected.

## 24.0 Transportation and Roads

Approximately 520 miles of BLM controlled roads are within the Klamath Falls Resource Area. The BLM maintained approximately 110 miles of these roads in FY 2012. Under deferred maintenance funds the historical Bureau of reclamation (BOR) house received renovation work. Also, the Hamaker Mountain road rehabilitation and reconstruction contract was completed. Title II funds were used for road signage throughout the resource area. Title III funds were used by Klamath County correction crew for roadside brushing. Refer to Table 24.1 for a summary of road treatments completed in FY 2012. (For additional discussion of road treatments specific to watershed restoration, refer to Section 5.0 - Aquatic Conservation Strategy.)

**Table 24.1 - Roads and Transportation Management Fiscal Year 2012**

	<u>FY 2012</u>	<u>FY 95-12</u>
Roads maintained (estimated miles)	110	1,294
Roads decommissioned (miles)	0.3	13.3
Roads closed - year round (miles)	0	27.6
Roads closed - seasonally (miles)	0	18
New roads constructed (miles)	0.4	10
Road improvements (miles)	5	44.6

## 25.0 Hazardous Materials

No known releases of hazardous wastes were identified on public lands in fiscal year 2012. (See Table 25.1.)

**Table 25.1 - Hazardous Materials Management Fiscal Year 2012**

	<u>FY 2012</u>	<u>FY 95-12</u>
Number of Hazardous materials site evaluations	0	11
Number of Environmental Site Assessments completed for realty acquisitions	0	10
Number of facility assessments for corrective actions	4	28
Number of abandoned hazardous sites found	0	7
Hazardous waste incidents requiring emergency response	0	2
Removal actions	0	7

## 26.0 Wildfire/Fuels Management

The BLM/Klamath Falls Resource Area is one of the leading Federal agencies in the field of prescribed fire and fuels management. Prescribed fire is used to reduce hazardous fuels accumulations so that wildfires are reduced in size and intensity when they do occur. Another benefit of prescribed fire is to mimic natural wildfire in a mosaic pattern to benefit the total ecosystem (plants, animals, fish, soils, trees, and human uses). On the Klamath Falls Resource Area in FY 2012, there were two wildfires and a total of 1 acre burned. (See Table 26.1)

The public was notified of proposed prescribed burning activities via news releases to local newspapers, television and radio stations as well as legal notices published in the Herald and News.

**Table 26.1 - Fire and Fuels Management Fiscal Year 2012**

	<u>FY 2012</u>	<u>FY 95-12</u>
Number (acres) of prescribed fires	2 (595)	25 (78,712)
Number (acres) of mechanical fuel treatment	4 (2,032) and 1,600 Tons of biomass	182 (45,081) and 3,255 Tons of biomass
Number (acres) of On-Resource Area wildfires:		
- number human caused wildfires (acres)	1(0.6)	33(695)
- number lightening or natural caused wildfires (acres)	1(0.35)	106(1538)

## 27.0 Law Enforcement

The Klamath Falls Resource Area has a full time BLM Ranger along with the services of a Klamath County Deputy Sheriff (through a law enforcement agreement with Klamath County) for law enforcement duties. The Ranger works cooperatively with the Lakeview BLM District Ranger, Oregon State Police, Lake County Sheriff's Office, Lakeview and Klamath Falls Police Departments, National Park Service, U.S. Forest Service, and U.S. Fish and Wildlife Service. Investigative support is provided by BLM Special Agents from the Oregon State Office. Law enforcement efforts are focused on protecting natural resources and property while providing for public and employee safety. Educating the public in the safe and proper use of public lands is accomplished by patrol, investigation of criminal activity, issuance of verbal or written citations, and making arrests where appropriate.

There were 30 incidents and violations recorded in the Klamath Falls Resource Area in 2012 (see Table 27.1). These included theft of Federal property, forest products theft, vandalism to public or private property, Archaeological Resource Protection Act (ARPA) violations, closure violations, search and rescue, human-caused wildfire, camping or day-use violations, and improper disposal of household trash. The table below summarizes the law enforcement activity within the Klamath Falls Resource Area since 1995.

**Table 27.1 - Law Enforcement Fiscal Year 2012**

	<u>FY 2012</u>	<u>FY 95-12</u>
Number of full-time Rangers	1	1
Number of Law Enforcement Agreements	1	1
Number of Incidents or Violations	30	966
Number of warnings issued	18	454
Number of citations issued	12	148
Number of Arrests	3	10

## 28.0 Rangeland Resources/Grazing Management

### Overview

The rangeland management program administers livestock grazing activities on most of the lands in the Klamath Falls Resource Area (approximately 208,000 of the KFRA’s 224,900 acres). Grazing licenses are issued yearly, authorizing up to approximately 13,000 Animal Unit Months (AUMs) on 95 individual grazing allotments (see Table 28.1). A percentage of the grazing fees (37.5%) go to the U.S. Treasury. The remaining fees are returned to the district and resource area for rangeland improvement projects to benefit wildlife and watershed resources while enhancing livestock grazing systems.

Existing projects such as water holes, spring developments, and fences are monitored and maintained, as necessary, either by range staff personnel or by the grazing users. Grazing use supervision is performed during the grazing season to ensure compliance with approved grazing authorizations. The range program also collects vegetation inventory data, rangeland condition and trend information, actual livestock use information, and monitors vegetation utilization levels on high priority allotments. This information is evaluated to determine whether allotment goals and objectives are being met. Monitoring data is being utilized in an ongoing effort to assess efforts to meet the Standards for Rangeland Health on all grazing lands.

As required by BLM policy, a Range Program Summary (RPS) is published periodically to update the public on implementation of the RMP. This summary typically includes information on the season-of-use and forage allocation by allotment. Since the original RPS, which was included as part of the June 1995 RMP/Record of Decision (Appendix H), there have not been enough significant changes in the range program to warrant publishing a full, independent update (i.e. recounting all of the information for all of the KFRA grazing allotments). As the resource area allotments are assessed, the public will be updated via this Annual Program Summary and Monitoring Report for the KFRA. This APS will fulfill the requirement for the RPS.

## **Table 28.1 – Range Resources Management Fiscal Year 2012**

	<b>FY 2012</b>	<b>FY 95-12</b>
Number of acres administered grazing	207,392 acres*	207,540 acres
Number livestock operators	83	83 (average/year)
Number of allotments	94*	95*
Number of AUMs	9470	~11,000 (average/year)
Number of permits leases renewed/transferred	4	176
Billings issued/fees collected	60/~\$13,000	~80/\$15,000 (average/year)
Number of allotments/acres assessed with RHSAs (Rangeland Health Standards Assessments)	2/399 acres	80/193,036 acres
Acres of Ecological Site Inventory	0	149,943 acres
Wild Horse and Burro Adoption Events	0	4
Number of horses/burros placed	0	61

\*One grazing allotment (Flesher [0820] – 160 acres) was entirely transferred to private ownership (i.e. sold) during FY 2006

## **Fiscal Year 2012 Summary**

### **Rangeland Health Standards Assessments**

Two (2) KFRA grazing allotments had Rangeland Health Standards Assessments (RHSAs) completed during FY 2012: Wilkinson (0850) and Dupont (0819). These two allotments contain a total of 399 acres and comprise about 1% of the KFRA's grazed acres. Since the Assessment process began in 1999, almost 93% of the KFRA's grazed acres have been assessed. The Wilkinson Allotment met all of the Standards for Rangeland Health. The Dupont Allotment did not meet all of the Standards.

Rangeland Health Standards Assessments compare accumulated rangeland monitoring data against the five Standards for Rangeland Health. These standards address watershed function in uplands; watershed function in riparian areas; ecological processes; water quality; and native, threatened and endangered, and locally important species. These assessments also compare the rangeland monitoring data against other pertinent objectives (i.e. land use plan, ESA Section 7 consultations, etc.) to see if current grazing use is meeting them. (Note: These Assessments only address grazing management - not other uses of the public lands.) On November 13, 1998, the Klamath Provincial Advisory Committee (PAC) approved the KFRA Plan for the Implementation of Standards and Guidelines. The KFRA Plan is the local plan to implement the policies and guidance stemming from the broad direction contained in the August 12, 1997 "Standards for Rangeland Health - Oregon/Washington Standards and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the States of Oregon and Washington."

The entire assessment process for the KFRA is scheduled to be completed in 2014 - a total of 16 years (1999-2012). This is an adjustment (extension) of the original schedule listed in the 2002 APS. This schedule extension is necessary in order to collect adequate information on many of the KFRA's smaller and lower priority allotments - most of which have never had basic rangeland resource information collected - so that a proper Assessment can be prepared.

### **Endangered Species Act Section 7 Consultation**

Three Three grazing allotments in the Gerber Reservoir area (Horsefly, Pitchlog, and Dry Prairie) are subject to formal consultation under Section 7 of the Endangered Species Act. These allotments in combination comprise over 20% of the KFRA. The existing Biological Opinion (BO) covering these allotments expired after the 1998 grazing season and was in need of renewal. All three were fully re-evaluated and re-consulted on in FY 99. Subsequent to the

re-evaluation, the USFWS issued a memorandum (1-10-99-I-47) that indefinitely extended the existing BO, with some very minor modifications, primarily dealing with monitoring requirements. An end-of-year grazing report for the 2011 grazing season was prepared for these allotments and submitted to the USFWS during early FY 2012, as required by the BO. The BO was reaffirmed for the 2012 grazing year by USFWS memorandum. The grazing report for the 2012 grazing year is pending at the time of providing input into this APS.

### **Grazing Leases and Fees**

Four grazing permits/leases were renewed or transferred during FY 2012. This process included appropriate NEPA review/documentation. Approximately 60 licenses or billings were issued authorizing approximately 9,470 AUMs in grazing use, and collecting approximately \$13,000 in grazing fees.

### **Riparian Fence Maintenance**

Range staff personnel continued to maintain the riparian enclosure/pasture fencing that is the responsibility of the BLM. This included the inspection and repair of approximately four to six miles of riparian-related fencing within the KFRA. Various portions of the riparian fencing around Duncan Springs, Pitch Log Creek, Long Branch Creek, Barnes Valley Creek, Tunnel Creek, the Antelope riparian pasture, Surveyor Campground, and the Dixie enclosure all received rebuilding or rehabilitation during FY 2011.

### **Monitoring of Grazing Allotments**

Monitoring of grazing use, and effects of that use, continued on priority allotments in accordance with the KFRA's Coordinated Monitoring and Evaluation Plan for Grazing Allotments. Eight high priority allotments had various monitoring data collected on them. These rangeland studies monitor utilization, ecological condition, vegetation trends, actual grazing use, and other resource attributes. As is typical of all grazing years, at least 100 grazing use supervision checks of high priority allotments were performed.

## **Fiscal Years 1996-2012 Summary**

### **Rangeland Health Standards Assessments**

The acreage of Assessments completed to date (FY 1999 to 2012) is 192,637 acres, or almost 93% of the KFRA grazing allotted acres, which includes all of the high priority resource concern allotments in the resource area. The remaining 7% of the KFRA grazing lands are low priority, fragmented public lands, which will be assessed gradually over the next two to three years as information becomes available.

### **Rangeland Ecological Site Inventory**

Ecological Site Inventory (ESI): An ESI was completed for the entire Gerber Block (Eastside of the resource area) in FY97 and FY98. The Gerber Block is approximately 110,000 acres. Ecological Site Inventory, the BLM's rangeland vegetation survey method, allows for classification and comparison of the current vegetation to its potential.

Beginning in late FY 2002 and continuing through 2012, the ESI was performed on the fragmented public lands located between Klamath Falls and the Gerber Block. The purpose of this survey is to acquire baseline, ecologically-based, vegetation condition information on fragmented BLM-administered lands that have never been rangeland vegetation inventoried. The ESI information collected will be used to complete Rangeland Health Standards Assessments on these allotments over the next three to four years, tentatively. It is expected that this ESI survey will be performed intermittently by existing rangeland management staff members over the next several years (FY 2012-2014) and will eventually classify a total of 55,000 additional acres.

## Monitoring of Grazing Allotments

Rangeland monitoring studies were completed during FY 1996-2012 in accordance with KFRA's Coordinated Monitoring and Evaluation Plan for Grazing Allotments. This directs the most monitoring emphasis on high priority (management category "I") allotments; in particular the three previously mentioned allotments that are under Section 7 Consultation. This includes various rangeland condition, trend, and utilization studies; riparian condition and photo trend studies; actual grazing use supervision and information; and other rangeland monitoring studies as needed.

## Wild Horse Management

The KFRA has one designated wild horse herd and herd management area, the Pokegama Herd Management Area (HMA). This HMA is located in the western portion of the resource area, west and north of the Klamath River Canyon, south of Highway 66, and east of Jenny Creek, overlapping the border between California and Oregon.

In 1996, 20 head of horses were removed from the HMA and adopted to the public via the BLM's Adopt-a-Horse program. Based on aerial and ground counts of the wild horse herd made during FY 2000, the herd size was 55 horses. This herd size was above the upper end of the Appropriate Management Level (AML) of 30-50 animals. This AML was initially established in the RMP (June 1995) and has been evaluated and reaffirmed in the Lakeview District Wild Horse Gather EA (OR-010-95-10) and again in the 1996 Topsy/Pokegama Landscape Analysis. Since the herd was above AML in FY 2000, a total of 18 horses were removed. These horses were transported to the Burns Wild Horse corrals and placed in the Adopt-a-Horse program. No additional removals have been done since FY 2000. The most recent aerial census (March 2010) counted 12 head in the HMA. During 2012, a volunteer student from Oregon Intitute of Technology performed a ground- based census of the herd. Her census counted 27 horses. Based on this census and knowledge of local staff, the actual total herd number is believed to be currently 30 to 35 head.

A major portion of the KFRA's wild horse program consists of performing compliance checks of wild horses and burros adopted by residents of Klamath County. Compliance checks of adopted horses and their maintenance facilities is required to assure that adopters properly execute their responsibilities as required by the Private Maintenance and Care Agreement that adopters sign when adopting an animal. Adopters are eligible to receive title to the animal after one year of appropriate care. In FY 2012, KFRA completed on-site inspections of 100% of the recently adopted and untitled local horses and burros. Seven horses were inspected for adopter compliance. One hundred and fifty-seven horses and/or burros have been inspected for compliance since 1997. Prior to FY 1997, compliance checks were not required.

## 29.0 Cadastral Survey

The Oregon Institute of Technology, in conjunction with BLM cadastral survey, has provided support to the resource area. Cadastral survey completed in FY 2012 is shown below (see Table 29.1).

**Table 29.1 - Cadastral Survey Summary Fiscal Year 2012**

	<u>FY2012</u>	<u>FY95-12</u>
Number of survey groups/projects completed	5	12
Number of projects ongoing	0	0
Number of monuments set*	20	72
Number of miles surveyed**	22	42

\*Remonumentation for individual projects.

\*\*Retracement

## 30.0 Education and Outreach

This fiscal year, the Klamath Falls Resource Area sponsored several community outreach events and played an active role in many others. Most of the events focused on public education about natural resources management, stewardship practices on public land, BLM programs and mission, and creating partnerships with private landowners and service organizations committed to improving conditions for all living things. KFRA employees presented programs to both school children and adults. Topics discussed included wetland/river biology, wildland fire suppression and prescribed fuels treatments, forest health practices, archeology, wildlife/fisheries biology, archaeology, and rangeland ecology, as well as careers in natural resources. (Refer to Tables 30.1, 30.2 and 30.3.)

### **Annual Horse Packing & Wilderness Skills Clinic**

In May, BLM sponsored a booth at the packing clinic, where employees handed out brochures and answered questions regarding the BLM and recreation opportunities. This event, which draws people from throughout the northwest, was held at the Klamath County Fair Grounds Event Center. There were over 5,000 visitors at this year's event.

### **Annual International Migratory Bird Day Celebration**

This marks the 12th year that the Klamath Falls Resource Area has participated in the International Migratory Bird Day (IMBD) event held in Klamath Falls. The IMBD is the hallmark outreach event for Partners in Flight, which focuses on migratory birds. Sponsors in this local event included the U.S. Fish and Wildlife Service, Oregon State University Klamath County Extension Service, Fremont-Winema National Forest, and community volunteers.

The main outreach event included guided bird walks along the Lake Ewana trail, mist netting demonstrations, art and photographic displays, a variety of hands-on educational activities for children, and participation from community organizations.

### **P.L.A.Y. (Promoting Lifetime Activities for Youth)**

In January, the Klamath Falls BLM participated in the second P.L.A.Y. event which is designed to promote outdoor activities for children. The BLM provided a nature trail for kids to explore and learn about wildlife and outdoor recreation. The event had over 1,000 participants including adults and children. The event was developed by local outdoor enthusiast groups such as The Mule Deer Foundation, Oregon Hunter's Association, and was sponsored by the U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, and several private groups.

### **RAP (Resources and People) Career Camp**

Designed for High School students ages 15 and older, the weeklong RAP Camp focuses on educating students about the region's natural and cultural resources and how they are all inter-related. Sessions focus on hands-on learning, with a wide variety of demonstrations and field trips throughout the week. Several agencies participate in the event including, KFRA BLM, Fremont-Winema National Forest, Modoc National Forest, USFWS, various private organizations, and private citizens.

### **Klamath County Fair**

This marks the 18th year the KFRA has participated in the Klamath County Fair. This year, the BLM provided an information booth on activities and observation materials for the 150th anniversary of the Homestead Act and 200th anniversary of the General Land Office. The public learned about the agency's history and BLM staff received many inquiries about recreation opportunities.

### **Klamath County School Forestry Tour**

The KFRA provided information at one of eight education stations at the Klamath County School Forestry Tour held in September at the Clover Creek Environmental Educational Area.

The tour is for all Klamath County sixth graders and their teachers. This year approximately 800 students and teachers attended the tour. The Forestry Tour provides students with a natural resource career awareness and appreciation of forest resources. The School Forestry Tour is coordinated by the Oregon State Extension Service with participation from the Oregon Department of Forestry, U.S. Forest Service, Oregon State Fish and Game, U.S. Fish and Wildlife Service, Henley High School Forestry Club, USDA Natural Resources Conservation Service, Klamath County Soil and Water District, and others. The tour was first presented in 1963.

**Table 30.1 - Environmental Education/Outreach Program Summary FY2012**

	<u>FY 2012</u>	<u>FY 97-12</u>
Number of education outreach programs/events offered	9	355
Number of participants	~10,900	2000-15,000/year

**Table 30.2 - Environmental Education/Outreach Annual Events FY 2012**

<u>Event/Activity</u>	<u>Date</u>	<u>Location</u>	<u># of Public Participants</u>
Wilderness & Horse Packing Clinic	May 4-6	Klamath County Fairgrounds	5,000
International Migratory Bird Day	May 12	Veteran's Memorial Park	750
RAP (Resources & People) Camp	June 18-22	Camp Esther Applegate	80
Klamath County Fair	Aug. 9-12	Klamath County Fairgrounds	5,000
6th Grade Forestry Tour	Sept. 18-21	Clover Creek Educational Area	1,000
P.L.A.Y.	Jan. 07	Klamath County Fairgrounds	1,000

**Table 30.3 - Environmental Education/Outreach Programs & Tours FY 2012**

<u>Program/Tour</u>	<u>Date</u>	<u>Location</u>	<u># of Public Participants</u>
Society for American Archaeology (professional paper)	3/15/12	Memphis, TN	40 adults
Artifact Interpretation and Outreach Display Case	On-going	KFRA Lobby	1,500 members of the public
State of Jefferson Conference (professional paper)	5/3/12	Oregon Institute of Technology Publication	55 adults
<i>Millions of Acres</i> in Northwest Passages Issue 13		Issue 13	
<i>The Gerber Homestead</i> (video)		www.youtube.com	
OIT Class – Tours	10/20/11, 7/18/12	Wood River Wetland	42 adult students (both tours)

## 31.0 Research

### Carex Working Group Surveys

In 2013, the Carex Working Group will be surveying the Wood River Wetland and the proposed Tunnel Creek ACEC for rare Carex species, along with documenting a complete grass, sedge, and rush species list for the sites. Preliminary field work was completed in 2012, and field work and observations will be started in July or August of 2013.

## **Neotropical Migratory Landbirds**

A long-term study of neotropical migratory landbirds is being conducted in cooperation with Klamath Bird Observatory, Pacific Southwest Research, PacifiCorp, Winema National Forest, and Point Reyes Bird Observatory. On BLM lands, there are 44 point-count stations and four constant effort mist-netting sites in a variety of habitats.

## **Oregon Spotted Frogs**

In FY 2012, the BLM continued to contribute bullfrog genetic samples and stomach contents to a US Geological Survey for a skeletal chronology/predation study regarding the American bullfrog. Samples have been examined from several study sites including the Wood River Wetland, Crane Creek and Upper Wood River. The BLM also continued to contribute genetic samples collected during spring egg mass surveys to USGS and Colorado State University. These samples will be analyzed to help managers better understand population isolation, isolation duration, and genetic interaction between populations.

## **Wood River Wetland**

The BLM hydrology program initiated a study in 2010 to determine whether it will be feasible to manage the internal wetland hydrology in such a way to accelerate the rate of accumulation of organic soils for the purpose of restoring subsided (lost land surface elevation through decomposition of peat soil) wetland soils. Because the land has subsided 3-5 feet as a result of past agricultural use, the land is now 6-8 feet below the adjacent lake and river and therefore must be managed with a network of pumps, levees, and water control structures. BLM is investigating the possibility that land subsidence could be reversed and the surrounding lake and river hydrology reintroduced to the wetland by breaching the levees. BLM established 21 plots in 2010, consisting of white feldspar clay horizons, that allow for annual measurement of accumulated soil depth. Using cryogenic coring methods, BLM took initial measurements of soil accumulation 2011 and 2012. Monitoring the clay horizon plots in addition to elevation change measurements at permanent benchmarks is planned for FY 2013. A monitoring status report was completed titled "BLM Wood River Wetland Water Quality and Subsidence Reversal Monitoring Summary 2012" and can viewed on the BLM website.

## **Cultural Resources**

The KFRA lead archaeologist led the anniversary activities for BLM Oregon/Washington in observing the 200th Anniversary of the General Lands Office and the 150th Homestead Act. Her research into the homesteading family of the 'Gerbers' resulted in a professional paper being presented at two professional meetings, an article published in BLM Oregon's "Northwest Passage" magazine, and a YouTube video.

A doctorate candidate from University of California - Berkley completed his research on rock art within the Klamath Basin, with two locations in the Klamath Falls Resource Area. His research resulted in a doctoral thesis.

# **32.0 Coordination and Consultation**

## **Federal Agencies**

Since 1995, BLM has continued to engage in cooperative efforts with other federal agencies including the U.S. Fish and Wildlife Service, U.S. Forest Service, Environmental Protection Agency, U.S. Geological Survey, Bureau of Reclamation, and National Resource Conservation Service on projects such as watershed analysis, water quality improvement projects, and the

Wood River Wetland Restoration Project. In addition, personnel from these agencies have been involved in planning, conflict resolution, and Section 7 consultation under the Endangered Species Act.

The Regional Interagency Executive Committee, Klamath Provincial Advisory Committee, and Klamath Basin Ecosystem Restoration Office.

## **U.S. Fish and Wildlife Service Wood River Wetland**

The USFWS and the BLM, through a memorandum of understanding, have shared staff to complete both restoration work in the refuge as well as restoration work at the Wood River Wetland.

## **Klamath Basin Ecosystem Restoration Office**

The Ecosystem Restoration Office (ERO) is an interagency office, which is operated cooperatively by the U.S. Fish and Wildlife Service, Bureau of Reclamation, U.S. Forest Service and the BLM. This interagency office provides funding, technical assistance, and monitoring for watershed restoration projects which are proposed by private landowners, private and public organizations and agencies, and the Upper Klamath Basin Working Group. The ERO works closely with the Klamath Basin Provincial Advisory Committee and watershed councils within the Klamath Basin. BLM has helped support this office since 1997.

## **State of Oregon**

The Klamath Falls Resource Area has continued its long term working relationship with Oregon Department of Forestry, Oregon Department of Fish and Wildlife, Oregon State Police, Oregon Department of Agriculture, Oregon Parks and Recreation Department, State Historic Preservation Office, Oregon Department of State Lands, Oregon Department of Water Resources, and the Oregon Department of Environmental Quality. BLM has participated with these agencies in diverse activities such as recreation and timber sale planning, fish habitat inventory, water quality monitoring and TMDL development and implementation, noxious weed management, hazardous material cleanup, air quality maintenance, wildfire suppression, and cooperative big game winter range vehicle closures..

## **Counties**

The Klamath Falls Resource Area (KFRA) is located within Klamath County. There is frequent communication between the KFRA and county commissioners and other county staff. This communication involves BLM proposed projects, county projects that may affect BLM lands, water quality issues, noxious weeds and other issues. County Commissioners receive copies of all major publications, project updates and project proposals.

## **Cities**

The KFRA works with staff from the City of Klamath Falls and other outlying communities (Bonanza, Bly, Lorella, Keno, etc.) in the areas where BLM lands adjoin city limits. On a regular basis, personnel from the Klamath Falls Resource Area attend a ten month long Leadership Klamath training which gives participants an overview of the history, workings, and interrelationships of city and county government and reviews services and relationships to private, state, and federal agencies.

## **Tribes**

The KFRA contacts the Klamath Tribes directly for coordination of many projects by presenting projects to the Tribal Council and by meeting bimonthly with the Klamath Tribes Culture and Heritage Department. The BLM is also working with numerous tribes on FERC projects. Tribes are represented on the Southeast Oregon Provincial Interagency Executive Committee, which coordinates activities within the province.

Additionally, the KFRA lead archaeologist has on-going participation in consultation with “down river” tribes as they relate to the Department of Interior’s Klamath Secretarial Decision study. These tribes include federally recognized and non-federally recognized tribes.

## **Watershed Councils**

There is ongoing participation with the Klamath Watershed Council and associated Working Groups. The BLM is represented on the Councils’ Technical Advisory Committee and participates in cooperative activities that can benefit public lands. The council is active in coordinating watershed and water quality enhancement projects on private lands.

## **Chartered Advisory Groups**

### **Southeast Oregon Resource Advisory Council**

The Council’s objectives and scope are to provide representative citizen counsel and advice to the Bureau of Land Management (BLM) and the U.S.D.A. Forest Service (USFS) line managers concerning the planning and management of the public land and national forest resources located in whole or in part within the Vale, Burns, and Lakeview Districts of the BLM and the Fremont, Deschutes, Ochoco, and Malheur National Forests. The actual jurisdictional boundary includes the Middle Snake/Boise, Oregon Closed Basins, and Goose Lake Hydrologic Units, as described by the United States Geological Survey. This area includes most of Malheur, Harney, and Lake Counties and very small portions of Klamath, Deschutes, Crook, Grant, and Baker Counties. Although none of the resource area lands are within the boundaries of the RAC, project coordination occurs at the Lakeview District level.

### **Medford District Resource Advisory Committee**

The BLM makes “Payments in Lieu of Taxes” and O&C Payments to states that in turn distribute the money to county governments. Public Law 106-393, the Secure Rural Schools and Community Self-Determination Act of 2000, signed October 30, 2000 established a new formula for calculating payments, which is based on selecting the highest three years in the eligibility period (1986-1999). The law also allows for annual increases in the payment based on Consumer Price Index information. Klamath County elected to receive payments under the new legislation. Beginning in Fiscal Year 2001 and continuing through 2008, payments are to be made based on historic O&C and CBWR payments to the counties. Proposals are submitted to the county by BLM and/or the public to fund projects on federal and/or private lands. The Medford District Resource Advisory Committee meets to evaluate and prioritize projects and distribute funding.

## **Other Local Coordination and Cooperation**

### **Klamath-Lake Forest Health Partnership**

A partnership was created in 1995 to promote forest health in Klamath and Lake Counties. This included private industrial and nonindustrial landowners, The Nature Conservancy, Chiloquin Visions in Progress, Klamath Ecosystem Education Partnership, consulting foresters, county, state, and federal agencies who work together on problem solving, sharing science and

information, and providing assistance to small woodland owners. The KFRA is a member of this active partnership that meets monthly.

## **Coordinated Resource Management Plans (CRMP)**

Coordinated resource management planning involves resource owners, managers, users, and specialists, concurrently formulating and implementing plans for the management and use of all natural resources and ownerships within a specific area. The group established through the planning effort provides a forum to help resolve resource conflicts. The KFRA has been involved in four Coordinated Resource Management Planning areas: the Yainax, Spencer Creek, Rock Creek and Gerber-Willow Valley areas.

### **Yainax CRMP**

The Yainax Butte CRMP was originally completed in 1974 in conjunction with the United States Forest Service (USFS), Oregon Department of Fish and Wildlife (ODFW), Oregon Department of State Lands (ODSL), Oregon Department of Transportation (ODOT), Klamath County Extension Service, Natural Resource Conservation Service (NRCS), Weyerhaeuser, and the common grazing permittee. In 1993, the plan was completely revised with the same group of organizations and a new grazing permittee. The revised plan is still in effect and being followed by the current grazing permittee (different than in 1993) and the successor to Weyerhaeuser - US Timberlands. The Yainax Butte CRMP addressed a myriad of issues including grazing, forestry, recreation, wildlife, T&E species, private land and cultural issues. The CRMP coordinates the management of the area to accomplish a broad range of resource goals and uses.

### **Spencer Creek CRMP**

This CRMP was developed in 1990 and was updated in 1994. The planning group is made up of county, state, and federal agency personnel and private landowners who coordinate watershed enhancement and other projects within the Spencer Creek Watershed.

### **Rock Creek CRMP**

The BLM's Rock Creek allotment is included in the broader Warm Springs Coordinated Allotment Management Plan. This plan was originally completed in 1983 with the Modoc National Forest (NF), Fremont National Forest, and the common permittee, and establishes resource objectives and institutes a grazing system to address the resource issues. The Warm Springs Coordinated Plan is in the process of being revised with the Modoc NF taking the lead, as they are the majority land administrator.

### **Gerber/Willow Valley CRMP**

Development of this plan began in FY 2000. The first objective is to complete a joint watershed analysis on two 5th field watersheds (Gerber and Willow Valley) with BLM, Forest Service and private landowners participating. Federal agencies involved are the Klamath Falls Resource Area, Fremont National Forest, and Modoc National Forest (California). The watershed analysis was completed in FY 2003. Efforts to complete a coordinated resource management plan are on hold.

### **Intermountain West Joint Venture (IWJV)**

The IWJV was formed in 1995 and covers eastern Oregon and parts of nine other western states. This group meets quarterly and has written an area plan with input by local Federal and State agencies, and private organizations to determine conditions of wetlands and identify opportunities to improve habitat. Oregon Wetlands Group hired a private consultant to write the plan that focuses on the Klamath Basin eco-region. This plan, as well as other eco-region plans within the ten western states, follows the guidelines outlined under the North American Wetlands Conservation Act of 1989. The representatives for the Klamath Basin eco-region are BLM, Ducks Unlimited, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Modoc National Forest, California Fish and Game, and Oregon Joint Venture. Wood River Wetland restoration is part of the completed plan.

# 33.0 National Environmental Policy Act Analysis and Documentation

## NEPA Documentation

The review of the environmental effects of a proposed management action can occur in any of four ways: administrative determination, categorical exclusion, environmental assessment, or environmental impact statement.

An administrative determination is made when NEPA documentation previously prepared by the BLM fully covers a proposed action and no additional analysis is needed. This procedure is often used in conjunction with a plan conformance determination. If a proposed action is fully in conformance with actions specifically described in the RMP and analyzed in the RMP/FEIS or a subsequent environmental assessment, a plan conformance determination may be made and no additional analysis is needed. This determination is documented in a “*Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)*.”

Some projects may qualify for a categorical exclusion from further NEPA documentation. Numerous types of projects have been determined that the nature and scope of the proposed activities do not individually or cumulatively have significant environmental effects on the environment. Specific categories of projects may therefore be exempt from requirements to prepare an environmental analysis. Categorical exclusions (CX) are covered specifically by Department of Interior and BLM guidelines.

An environmental assessment (EA) is prepared to assess 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 will significantly affect the quality of the human environment. A Finding of No Significant Impact (FONSI) is prepared to document the determination that actions proposed will not create significant effects. Once the authorized officer (KFRA Field Manager) decides to implement actions proposed and analyzed in an environmental assessment, a decision record (DR) is prepared to document that decision.

Major proposals that could significantly affect the environment, and have not been previously analyzed through an environmental impact statement (EIS), require that an EIS be prepared. A Record of Decision (ROD) is prepared to document the decision of the authorized officer (Lakeview District Manager) to implement actions analyzed in the EIS.

Table 33.1 shows the number of NEPA documents completed since FY 1995. No protests or appeals were filed in FY 2012.

**Table 33.1 - NEPA Analyses and Documentation Fiscal Year 2012**

	<u>FY 2012</u>	<u>FY 95-12</u>
Categorical Exclusions	15	359
Plan Conformance and Determinations of NEPA Adequacy	4	205
Environmental Assessments/FONSI	2	77
Decision Records	5	88
Environmental Impact Statements	0	2
Activity Level Plans	0	1
Record of Decision	0	1
Resource Management Plan Amendments	0	1

# 34.0 Plan Evaluations

## 2012 Evaluation

National BLM policy and federal regulations (43 Code of Federal Regulations (CFR), §1610.4-9) require that resource management plans be evaluated every five years. Plan evaluation is the process of determining if land use plan decisions and NEPA analysis are still valid and whether the plan is being implemented. The Klamath Falls Resource Area last evaluated its RMP in 2011 in conjunction with evaluations on the Resource Management Plans for the other Western Oregon BLM Districts. The Resource Management Plan Evaluation Report for Western Oregon Districts was finalized in August of 2012. The report can be found on the Oregon BLM's planning website: <http://www.blm.gov/or/plans/>

The plan evaluation showed that timber sales associated with the lands allocated to sustained yield timber production have continued to depart substantially from the assumptions of the 1995 RMP determination of the Allowable Sale Quantity (ASQ). The reduced levels of regeneration harvest sales and acceleration of thinning from the harvest land base has been a long-term trend since 1999. Accelerated rates of thinning without replenishment of younger forest stands through regeneration harvest means that opportunities for thinning will eventually be exhausted. The current approach to a forest management regime that deviates so considerably from the RMP assumptions used in determination of the ASQ is not sustainable at the declared ASQ level.

There is new information and changed circumstances relevant to management direction and land use allocations for the northern spotted owls. The new Recovery Plan for the northern spotted owl was completed in 2011 and includes recovery actions not addressed in the 1995 RMPs. Current and proposed spotted owl critical habitat does not align with land use allocations in the 1995 RMPs. There are new listings, recovery plans (or draft recovery plans), and designations of critical habitat for many other fish, plant, and terrestrial species.

The evaluations concluded that most decisions in the current RMPs are still valid and that BLM can continue to implement them, however, based on the above information it found a need for changes to the timber and wildlife programs and minor changes to most other programs. A plan revision is warranted. This is the appropriate mechanism for the BLM to comprehensively review the mix of resource uses and protections and adjust RMP objectives and associated land use allocations and management direction as needed.

# 35.0 Plan Maintenance

The Klamath Falls Resource Area Management Plan Record of Decision was approved in June of 1995. Since that time, the Klamath Falls Resource Area 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. Potential minor changes, refinements or clarifications in the plan may take the form of maintenance actions.

Maintenance actions respond to minor data changes and incorporation of activity plans. This maintenance is 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 Klamath Falls Resource Area Annual Program Summary and Monitoring Report. Examples of possible plan maintenance issues that would involve clarification may include the level of accuracy of measurements needed to establish riparian reserve widths, measurement of coarse woody debris, etc. 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 (REO) or Provincial Advisory Committee (PAC). Plan maintenance is described in the Klamath Falls Resource Area Management Plan Record of Decision.

### **Plan Maintenance for Fiscal Year 1995**

- REO memorandum dated 10/13/94: Memo reviewing BLM's interpretation of Coarse Woody Debris requirements.
- REO Memorandum dated 3/22/95: Memo reviewing BLM site potential tree height determination.
- REO Memorandum dated 4/7/95: Clarifies access for key watersheds, how to meet S&G for no net increases in roads where third parties have access rights.
- REO Memorandum dated 7/5/95: Interagency memo exempting certain silvicultural activities from LSR assessment requirements.
- BLM IM OR-95-123, dated 7/5/95: Memo clarifying when watershed analysis is and is not required for activities in Riparian Reserves.
- REO Memorandum dated 7/24/95: Memo changing status of dwarf mistletoe in Table C-3 of the ROD.
- REO Memorandum dated 8/31/95: Memo on LSR boundary adjustments.

### **Plan Maintenance for Fiscal Year 1996**

- REO Memorandum dated 12/15/95: Memo clarifying REO review of LSR assessments.
- Memo on protocols for Survey & Manage amphibians (BLM IB-OR-96-006, dated 3/19/96).
- REO Memorandum dated 4/26/96: Additional Guidance on LSR assessment reviews.
- REO Memorandum dated 6/11/96: Memo changing provisions regarding management of the lynx.
- Memo implementing REO memo on management of lynx (BLM IM- OR-96-97, dated 6/28/96)
- Memo on plan maintenance (OR IB-OR-96-294, dated 7/5/96)
- REO Memorandum dated 7/9/96: Memo exempting certain commercial thinning projects in LSRs and MLSAs from REO review.
- Internal Memorandum No. OR-96-108 (dated July 26, 1996) instructed the Klamath Falls Resource Area to remove *Buxbaumia piperi*, a moss that was erroneously listed as a species considered at risk in the Northwest Forest plan. This removal was deemed necessary. *B. piperi* is not considered to be rare, therefore the standards and guidelines from the Northwest Forest Plan were applied in error.
- Memo on dwarf mistletoe (BLM IB-OR-95-443, dated 8/15/96)
- REO Memorandum dated 9/6/96: Draft memo limiting surveys for certain arthropods to southern range.
- REO Memorandum dated 9/30/96: Memo amending commercial thinning exemption in LSRs.

### **Plan Maintenance for Fiscal Year 1997**

- BLM IM-OR-97-007, dated 11/1/96: Interagency Memo clarifying implementation of S&M component 2 species; definitions of S&G terms such as "ground disturbing" and "implemented."
- Memo directing changes in surveys for arthropods (BLM IB-OR-97-045, dated 11/8/96).
- Memo on implementing Coarse Woody Debris Standard & Guide (BLM IB-OR-96-064, dated 11/19/96).

- Memorandum dated November 8, 1996: Northwest Forest Plan Record of Decision (ROD). The sentence “Understory and forest gap herbivores” (page 61) was changed to be specific to the south range.
- Northwest Forest Plan, Adjustments in the Great Gray Owl (GGO) Survey Protocol. These adjustments were recommended by the Research and Monitoring Committee subsequent to findings and recommendations of a science panel. The six recommendations for the 1997 survey season were incorporated into the May 12, 1995 version of the protocol. In addition, habitat occupancy are to be located in habitat with the highest likelihood of supporting nesting Great Gray Owls. Methods, locations, and timing of habitat occupancy surveys are at the discretion of the resource area. Among the recommendations is one acknowledging that, using the onset of snowmelt to determine the start of the survey season, may not allow completion of all four visits prior to May 15. However, there should still be a good faith effort put forth to complete the four visits between March 15 and May 15, even if they go past the specified time period. A total of six visits is still required. In southwestern Oregon, some Great Gray Owls have been found below 3,000 feet elevation. Although not a requirement at this time, surveys below 3,000 feet (but otherwise according to protocol) will both assist in maintaining species viability and provide important data for evaluation of the GGO Record of Decision requirements. Field offices should assess which, if any, lower elevation locations would be priority areas to survey given the existing workload, staffing, and funding.
- In 1997, the Klamath Falls Resource Area developed some criteria to use to select the “16-25 large green trees per acre...” for retention in a harvest unit. As of 1997, the Klamath Falls Resource Area was still trying to determine which prescription/harvest unit this standard and guideline was intended for (Density Management, Regeneration Harvests, Commercial Thinnings, Patch Cut, etc.). (See 1999 Plan Maintenance for clarification).
- The 1997 APS stated: Klamath Falls Resource Area RMP, Timber Resources, Page 56, Unscheduled Harvests, 4th paragraph, “On the Westside, retain 16 to 25 large green trees per acre in harvest units”. This plan maintenance clarifies that harvest units, prescription units, and treatment units are the same thing. For each prescription unit, stand exams will be conducted to determine existing stand structure. Unit reports will show, by species: basal area, crown closure, and the average number of trees per acre by diameter class. The number of snags and amount of coarse woody debris will also be determined. A prescription unit average of at least 16 green trees from the larger size classes present within the unit will be retained. Criteria for retention will be:
  - Species: Tree species naturally adapted to the site, especially those species presently under-represented (usually ponderosa pine, Douglas-fir, and sugar pine).
  - Condition: Vigorous trees and other trees in any condition having special habitat characteristics. This mix, will ideally supply overstory structure, as well as a variety of a snags and logs in a various decay classes over an extended time period.
  - Size: Trees from the larger size classes of a given unit. (The size and density of trees vary tremendously, however. The largest trees in some units do not exceed 14 inches DBH; others have many trees over 30 inches DBH).

## **Plan Maintenance for Fiscal Year 1998**

- Guidance on Implementation of the 15 percent retention Standard & Guideline: Joint BLM/Forest Service final guidance, which incorporated the federal executives’ agreement, was issued on September 14, 1998, as BLM-Instruction Memorandum No. OR-98-100. The memorandum emphasizes terminology and intent related to the Standards and Guidelines, provides methods for completing the assessment for each fifth field watershed, dictates certain minimum documentation requirements, and established effective dates for implementation. This Instruction memorandum is adopted in its entirety as RMP clarification.
- Survey Protocols for Survey and Manage Species: Final protocols were issued during FY98 for Component 2 lichens, the fungus *Bridgeoporus nobillissimus*, terrestrial mollusks, and aquatic mollusks. These protocols are adopted in their entirety as RMP clarification.
  - 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.
- Copies of the Executive Order, the accompanying Memorandum for the Heads of All Departments and Agencies, and Council on Environmental Quality Guidance on Environmental Justice issued February 1998 can be requested from the Klamath Falls BLM office.

## Plan Maintenance for Fiscal Year 1999

- Correction of numerous errors or updates to Appendix H - "Grazing Management and Rangeland Program Summary" of the KFRA ROD/RMP (pages H-1 through H-77).
  - Page H-5, Chase Mountain Allotment (0101); Page H-7, Edge Creek Allotment (0102) and Buck Mountain Allotment (0103); Page H-10, Dixie Allotment (0107); Page H-11, Dry Lake Allotment (0140); and H-13, Grubb Springs Allotment (0147). Under the "Constraints" sections, change "Weyerhaeuser Company" to "U.S. Timberlands, Inc.". This reflects the 1986 change in ownership for all of these private, intermingled lands.
  - Page H-26, JELD-WEN allotment (0824). Due to land exchanges, the "Public Acres" should be changed from 360 to 240. Also, the "Active Preference", "Total Preference", and "Total" under the "Grazing Administration Info (AUMs)" column should be changed from 36 to 24.
  - Page H-32, Kethcham allotment (0835). Name should be spelled **Ketcham**.
  - Page H-51, Campbell allotment (0878). "Suspended nonuse" should be 13 AUMs instead of 12; "Total Preference" should be 60 AUMs instead of 59.
  - Page H-56, Dry Prairie allotment (0885). "Exchange of Use" AUMs should be changed from 275 AUMs to the "30 AUMs permanent AUMs, although the total number is variably higher depending on private land leases in the Dry Prairie pasture".
- "Corrections of errors or updates to Klamath Falls Resource Area RMP Appendix H, Grazing Management....."
  - Page H-56, Dry Prairie allotment (0885). Under "Grazing Administration Info. (AUMs)" the "Active Preference" should be changed from 608 to 642 AUMs, and the "Suspended Nonuse" should be changed from 392 to 358 AUMs. This change reflects the transfer of state lands to public ownership in 1988 that was not previously reflected on the grazing permits.
- Additional information to the Grazing Management section of the ROD/RMP dealing with the recently implemented Standards for Rangeland Health.
- KFRA ROD/RMP, Page 62-63, "Grazing Management", "Management Actions/ Direction", "General" section. The following should be added after the 5th paragraph (one on Standards and Guidelines): Recently (August 12, 1997), the "Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public lands Administered by the Bureau of Land Management in the States of Oregon and Washington" was implemented. This and related guidance requires that all grazing lands be assessed to see if the grazing use meets the 5 Standards for Rangeland Health. These standards address watershed function in uplands; watershed function in riparian areas; ecological processes; water quality; and native, threatened and endangered, and locally important species. This guidance will be effected in accordance with the KFRA's "Plan for the Implementation of Standards and Guidelines" dated October 29, 1998 (available upon request).
- Additional support for the Appropriate Management Level (AML) of 30-50 head for the Pokegama Herd Management Area (HMA).
  - KFRA ROD/RMP, Page 64, "Wild Horse Management", "Management Actions/ Directions" section. Additional support information should be added after the second paragraph as follows:

- The Lakeview District Wild Horse Gather Environmental Assessment (OR-010-95-10) and the Topsy-Pokegama Landscape Analysis (July 1996) both affirmed that the wild horse herd should be kept within the 30-50 head AML as proposed in the ROD/RMP. This level is necessary to "...ensure a thriving natural ecological balance... and protect the range from deterioration associated with overpopulation" as stated in this plans objectives for Wild Horse Management and required by the Wild Free-Roaming Horse and Burro Act of 1971. 20 head were removed from the HMA in 1996 in order to get the herd number down within the AML.
- Klamath Falls Resource Management Plan, Appendix K, Water and Soils, Page K-8, Implementation Monitoring Question #12 is not stated correctly. Add the word "coordinated" before the word "watershed-based". Thus, the first part of the question should read: "What is the status of cooperation with other agencies in the development of coordinated watershed-based Research Management Plans and other cooperative agreements to meet Aquatic Conservation Strategy Objectives?"
- In the RMP dated June 1995, The section on energy and minerals refers to restrictions listed in appendix "G" located in volume II of the Final KFRA RMP & EIS. **This should refer to appendix "K" in Volume II.**
- Appendix "G", pages 12-13 in the Final KFRA RMP/ROD, dated September 1994, failed to give exact distant measurement for the buffers associated with the timing limitations for bald and golden eagles, osprey and sage grouse leks. **The sentence should read** " Surface occupancy and use is prohibited . . ., within 1/4 mile of known . . . sites.
- Appendix G, KFRA/ROD, pages 12 and 13 **Add:** Timing Limitation, Resource: Wildlife - Northern Spotted Owl, Stipulation: Surface occupancy and use is prohibited from March 1 to August 15, within 1/4 mile of known Northern Spotted Owl nest sites and nesting habitat.
- In same document and same appendix on page G-15, the controlled surface use for the Upper Klamath River - segment 2 should also state "1/4" mile.
- Change in specific provisions regarding management of the great gray owl. The NFP Record of Decision page C-21; Klamath Falls Resource Area RMP Record of Decision pages 39-40.
- The NFP states the following with regard to management: "Specific mitigation measures for the great gray owl, within the range of the northern spotted owl, include the following: provide a no-harvest buffer of 300 feet around meadows and natural openings....."
- For the Topsy/Pokegama Landscape Analysis Area, the Klamath Falls Resource Area wrote a Late Successional Reserve Assessment (LSRA) which addressed a variety of habitat manipulations for the long-term enhancement of great gray owl nesting habitat within the 300-foot buffers required around meadows and natural openings. These habitat manipulations were proposed in areas where the following conditions are present: 1) marginally suitable as great gray owl habitat, 2) at risk of decline to the point where suitable nesting habitat conditions are unattainable in the long-term, and 3) at risk due to poor forest health conditions including high fuel loads and/or overstocking.
- As a result of discussions in 1999 between members of the Regional Ecosystem Office Team and the Klamath Falls Resource Area Staff, meadows and natural openings would be buffered only in cases where it has been determined the area is "occupied" by great gray owls. Occupancy is defined in the May 12, 1995, great gray owl survey protocol. Forested areas adjacent to meadows and natural openings would receive 300-foot buffers within approximately two miles from activity centers of sites occupied by great gray owls.
- A Memorandum from the Executive Director to the State Director dated August 4, 1999, served as documentation of the Regional Ecosystem Office's (REO) review of the Late Successional Reserve Assessment and finding that the LSRA provides a sufficient framework and context for future management activities within the 300-foot meadow buffers in the Topsy/Pokegama Landscape Analysis Area.
- **Green Tree Retention – Clarification:** On pages 23, 33 & 56 of the KFRA RMP, for Westside Matrix lands, Management Actions / Directions states: *"Retain 16 to 25 large green trees per acre where available.* To be consistent with the Medford RMP ( Chapter 2-21) and Page C-42 of the 1994 ROD for Amendments to Forest Service and Bureau of Land Management Planning Documents

Within the Range of the Northern Spotted Owl, the KFRA will change the wording in the KFRA RMP to read:

*“Retain at least 16 to 25 large green trees per acre in regeneration harvest units.”*

- **Coarse Woody Debris Retention – Clarification:** On Page 23, 33 & 57 of the KFRA RMP, for Westside Matrix lands, Management Actions/Direction states:

“Leave 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 feet long. Decay class 1 and 2 logs will be credited toward the total. Down logs will reflect the species mix of the original stand. Where this management actions/direction cannot be met with existing coarse wood debris, merchantable material will be used to make up the deficit.”

To be consistent with Page C-40 of the 1994 ROD for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, the KFRA will change the wording in the KFRA RMP to read:

“In regeneration harvest units, leave 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 feet long. Decay class 1 and 2 logs will be credited toward the total. Down logs will reflect the species mix of the original stand. Where this management actions/direction cannot be met with existing coarse wood debris, merchantable material will be used to make up the deficit.” In areas of partial harvest, the same basic guidelines shall apply but they should be modified to reflect the timing of stand development cycles where partial harvesting is practiced.

#### **Rationale for change:**

**Green Tree Retention:** The proposed change will help clarify when the KFRA must meet the 16-25 standard and guide (S&G). It was noted during the 3rd year evaluation that there was a difference in the wording and subsequent interpretation between the Medford District, the 1994 ROD, and the KFRA RMPs relating to this S&G. The Medford District applies this S&G to regeneration harvests units only in accordance with the 1994 ROD direction on Page C-42. The word “regeneration” was left out of the KFRA RMP. Subsequently, KFRA personnel interpreted this S&G be applied to all types of harvest units including density management harvests. The KFRA has completed four density management harvests to date and posttreatment stand exam data indicates that over 200 trees per acre are being retained including the larger and more vigorous trees. BLM Managers feel that this S&G is not applicable nor was it intended for density management harvests and should only be applied to regeneration harvest units as defined in the Medford RMP. The 16 to 25 tree S&G in regeneration harvest units was a 1994 ROD standard and guide for retention of large trees and should be sufficient to meet the intended objectives of structural retention for both a legacy component as well as serve as a shelterwood for the understory component. In addition, this change will align with how these stands were initially modeled.

**Coarse Woody Debris Retention:** The proposed change will clarify the coarse woody debris requirements for regeneration harvests versus density management harvest and will provide consistency with the Page C-40 1994 ROD coarse woody debris requirements for regeneration harvest. The coarse woody debris requirements for partial harvests which includes density management are found on Page 23 of the KFRA RMP.

- On pages 23, of the KFRA RMP, for Westside Matrix lands, Management Actions / Directions states: “When an area is regeneration harvested, limit patch size to 3 acres.”The above sentence erroneously includes the word “regeneration” where “density management” was intended. The KFRA will modify the patch cut size limit from 3 acres to 5 acres. The limit on patch cuts to 15% or less of the density management harvest area, which was intended, and was used in modeling, was not mentioned in the RMP. Therefore, the correct wording for this maintenance should be modified to read:

*“Patch cuts within a density management unit are limited to 5 acres in size, to no more than 15% of the density management treatment area, and 5 to 10 of the larger trees per acre will be retained.”*

### **Rationale for Change:**

A clarification is needed between patch cuts and regeneration harvests. Patch cuts are small openings in relatively large density management units. The primary objective of cutting small patches/openings is to regenerate under-represented species in the stand; normally pines and Douglas-fir. Due to past harvesting practices and fire suppression, the species composition of stands has trended from shade intolerant species (pines and Douglas-fir) towards stands dominated by tolerant species (white fir). On page E-10 (Appendix E) of the RMP, Table E-1 lists the “Desired Species Composition (by percent conifer basal area)” for the South General Forest Management Area (SGFMA). The RMP states on page E-10 that the KFRA is to “Manage so that trees species over time trend toward ...” these composition levels. One of primary reasons for this objective is to improve the resiliency of the stands to natural disturbances (insects, disease, and fire). The small patch cuts are one of the prescriptions the KFRA is using to meet the species composition objective.

The amount of patch cuts that can be implemented in a density management unit is not changing. The limit, as modeled, has always been and will remain up to 15% of the unit. However, because the 15% limit has never been documented, it was necessary to add that statement as well. The size is increasing from 3 acres to 5 acres to insure that sufficient sunlight is reaching the younger seedlings and is not impacted by the shade from the patch cut edge. To date, approximately 72 acres (2.3%) of 3072 acres of density management treatments have received patch cuts.

- **Clarification of What a Regeneration Harvest Is, and the Constraints Involved When Implementing.**

A regeneration harvest is a silvicultural system discussed in a number of places in the RMP. The partial objective of regeneration harvests (See Glossary, page 6-14, Vol. 1 of the FEIS) is to open “a forest stand to the point where favored tree species will be reestablished.”

There are two constraints to regeneration harvests. The first is mentioned in Appendix E, page E-10 of the RMP that states, “Regeneration harvests would not be programmed for stands under 120 years of age and generally would not be programmed for stands under 150 years of age within the next decade unless required by deteriorating stand condition, disease, or other factors that threaten the integrity of the stand.” The second constraint relates to the Plan Maintenance items mentioned above that states; retain at least 16 to 25 large green trees per acre in regeneration harvest units. The KFRA projected 131 acres of regeneration harvests on the Westside and 33 acres on the Eastside. To date, no regeneration harvests have been implemented due to placing priority on mortality salvage sales.

- **Clarification of Snag Classification**

During a timber sale review in KFRA in fiscal year 1999, the initial post treatment stand exam data indicated that not enough Class 1 & 2 snags were retained. The stand exam data was surprising because many snags were intentionally marked for removal as required in the silvicultural prescription due to an already abundant down fuels load and snags at the time of marking. A review of the post treatment stand exam data revealed that a snag was only classified as Class 1 or 2 if it had just died and/or still had red needles on it (1-2 years old). All other snags were classified as Class 3, 4, or 5. The KFRA determined that it needed a standardized format for classifying snags. The BLM Forest Survey Handbook, BLM Manual Supplement 5250-1, pages IV-10 to IV-12 was reviewed to determine if it was sufficient for classifying snags. The handbook provides both pictures and descriptions of the different snag categories. The KFRA concluded that the handbook would be sufficient for classifying snags for future monitoring purposes

## Plan Maintenance for Fiscal Year 2000

- **Page I-7, KFRA RMP, Appendix I - Land Tenure,**

**Delete:** Remove the following lands from Land Tenure Zone 3 and place them into Land Tenure Zone 1.

T.36 S., R.15 E. W.M.; Sec. 28 (all); Sec. 32 (all).

**Rational for Change:** The presence of the endangered species, cinder pit, and wetlands associated with Campbell Reservoir on the public lands preclude the BLM from making the finding that the resource values on the federal land are less than the resource values of the private land.

- Page #\_C-44, Last Paragraph, Line # 2 (Also found on other pages) of **Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning documents Within the Range of the Northern Spotted Owl Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl.**

*“Provide for retention of old-growth fragments in watersheds where little remains.”*

*“Landscape areas where little late-successional forest persists should be managed to retain late-successional patches. This standard will be applied to fifth field watersheds (20-200 square miles) in which federal forest lands are currently comprised of 15 percent or less late-successional forest.”*

- Pages 51-52, **KFRA RMP, Off-Highway Vehicles**

**Add:**

- To allow off-highway vehicles to use BLM/Klamath Falls Resource Area roads when weather conditions are such that damage to roads will not occur, or to use roads that will not impact threatened, endangered, or sensitive plant, animal, or fish species.
- To prevent off-highway vehicles from using BLM/Klamath Falls Resource Area roads by extending the seasonal closure when weather conditions are such that damage to roads will occur, or to prevent use of roads that will impact threatened, endangered or sensitive plant, animal, or fish species.

Before either scenario is implemented, the proposal must be reviewed by the Klamath Falls Resource Area Interdisciplinary Team (ID Team). The ID Team will make a recommendation to the Klamath Falls Field Manager to open the road or to extend the closure. The Field Manager will consider the ID Team’s recommendation and make a decision on that recommendation.

A decision to extend the closure must be accompanied by publishing a Notice of Emergency Closure in the Federal Register according to the regulations found at 43 CFR 8364.1.

**Rational for Change:** The Plan Maintenance provides a mechanism to close a road prior to November 1<sup>st</sup> or to extend the closure past April 15<sup>th</sup>, if conditions warrant it. The same mechanism would be used to delay closing a road past the November 1<sup>st</sup> date or to open a road prior to April 15, if conditions warrant it.

## **Plan Maintenance for Fiscal Year 2002**

### **Change of RMP Evaluation Interval to Five Years**

The 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 circumstance to warrant amendment or revision of the plan. The ecosystem approach of the 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 RMP. The Annual Program Summaries and Monitoring Reports continue to provide the cumulative RMP accomplishments. Changes to the RMP continue through appropriate amendments and plan maintenance actions. A five year interval for conducting evaluations is consistent with the BLM planning regulations 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. The next evaluation of the Klamath Falls Resource Area RMP will address implementation through September 2008.

## **Plan Maintenance for Fiscal Year 2010**

### **Maintenance of the RMP Relative to Communication Sites**

The Klamath Falls Resource Area Resource Management Plan and Environmental Impact Statement (RMP/EIS), approved September 1994, included a statement in the direction for the Proposed Resource Management Plan to, “*Allow expansion of communication facilities on existing communication sites.*” (RMP/EIS p.2-63).

The current direction for communication sites in the KFRA RMP includes direction under the Headings, “Rights-of-way”, and “Land Use Allocations” that reads:

*“Communication facilities will be allowed on existing communication sites, also shown on Map 12.”* (KFRA RMP p. 66).

The RMP references Map 12, but fails to reference “Table 15. Communication Sites”. Text should be added to page 66 of the RMP following the third paragraph as follows in italics:

*“Communication facilities will be allowed on existing communication sites, also shown on Map 12 and listed in Table 15. This table lists existing uses (under “Site Type”) at designated Communication Sites and identifies current “BLM Restrictions” for those sites that may inhibit development unless alternate methods are used.”*

Within Table 15 for the Stukel Mountain site, the spelling of the word “poer” should be corrected to read: “Must be FAA and low power radio compatible.”

## **Plan Maintenance for Fiscal Year 2011**

### **Maintenance of the RMP Relative to Best Management Practices for Water Quality**

The Klamath Falls Resource Area conducted a review of the Resource Management Plan RMP and updated the Best Management Practices (IM-OR-2011-018) to provide direction regarding road maintenance practices and road-related actions with the intention to minimize or prevent sediment delivery to waters or the United States in compliance with the Clean Water Act of 1972 and its revisions.

The Best Management Practices are incorporated into the Klamath Falls Resource Area RMP to minimize or reduce the conveyance and delivery of sediment to the waters of the United States. However, not all of the BMPs listed will be selected for any specific management action. Each activity is unique and based on site-specific conditions. The selection of an individual BMP or a combination of BMPs and measures will be incorporated into project-specific BMP design (IM #OR-2011-074).

**KLAMATH FALLS RESOURCE AREA**  
**MONITORING REPORT**  
**Fiscal Year 2012**



# **KLAMATH FALLS RESOURCE AREA RESOURCE MANAGEMENT PLAN MONITORING REPORT FY2012**

## **M.1 Introduction**

This document represents the seventeenth year monitoring report of the Klamath Falls Resource Area Resource Management Plan since the Record of Decision was signed in June 1995. This monitoring report compiles the results and findings of implementation monitoring for fiscal years 1996-2012. This report does not include all the monitoring conducted by the Klamath Falls Resource Area that is 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).

## **Fiscal Year 1996-2012 Monitoring Summary**

The Resource Management Plan monitoring effort for Fiscal Years 1996-2012 addressed the 88 implementation questions relating to the 21 land use allocations and resource programs contained in the Monitoring Plan. There are 54 effectiveness and validation questions included in the Monitoring Plan. The effectiveness and validation questions were not addressed because some time is required to elapse after management actions are implemented in order to evaluate results that would provide answers.

### **Findings**

Monitoring results found full compliance with management action/direction in the 21 land use allocations and resource programs identified for monitoring as well as the 88 implementation monitoring questions contained in the plan.

### **Recommendations**

No implementation or management adjustments are recommended, as Fiscal Year 1996-2012 monitoring results indicate very high compliance with management action/direction.

### **Conclusions**

Analysis of the Fiscal Years 1996-2012 monitoring results concludes that the Klamath Falls Resource Area has almost 100% compliance with management action/direction, and therefore no major changes in management direction or resource Management Plan implementation is warranted at this time. The results indicate a continuing conscientious implementation of the plan by informed and knowledgeable staff and managers.

## **Fiscal Year 2012 Monitoring**

### **Introduction**

This monitoring report compiles the results and findings of implementation monitoring of the seventeenth full fiscal year of implementation of the RMP, fiscal year 2011. Tables M-1 and M-2 provide a summary of the projects monitored and the selection categories respectively.

This report does not include the monitoring conducted by the Klamath Falls Resource Area that is 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).

## **Table A - Projects Monitored FY 2012**

<b><u>Project Type</u></b>	<b><u>Number and/or Names of Projects Monitored</u></b>
<b>Timber Sales</b>	Buck 13
<b>Silviculture Treatments</b>	Forest Development Projects: restoration thinning, precommercial thinning, site preparation, tree planting, reforestation surveys, maintenance/ protection of stands
<b>Fish Habitat Improvement</b>	In FY 2012, post-treatment monitoring was conducted on two reaches of Spencer Creek since the helicopter log placement project. For additional information regarding fish habitat improvement project implementation and monitoring, please refer to sections 9.0 (Aquatic Species and Habitat Management), 12.0 (Special Areas Management), and 31.0 (Research)
<b>Wetland Water Quality</b>	Water quality monitoring at the Wood River Wetland, including pH, conductivity, dissolved oxygen, ammonia, nitrate+nitrite, total Kjeldahl nitrogen (TKN), orthophosphate, and total phosphorus were measured to assess nutrient loading to Agency Lake (see also Wood River Wetland Monitoring Section). Temperature monitoring was accomplished in Wood River, Spencer Creek, Gerber Tributaries, and Klamath River. Flow monitoring was done at Spencer Creek Hook-up road culvert and at the Wood River Wetland fish screen. For additional information regarding water quality project implementation and monitoring, please refer to sections 5.0 (Aquatic Conservation Strategy), 7.0 (Water and Soils), 9.0 (Aquatic Species and Habitat Management), 12.0 (Special Areas Management), and 31.0 (Research).
<b>Wildlife</b>	<p><u>Wood River Wetland</u> - Oregon spotted frogs, American bullfrogs, eagles/raptors, and neotropical migratory landbirds</p> <p><u>Remainder of the Resource Area</u> - Three areas in the Willow Valley watershed for bats as part of the Oregon Bat grid; 10 osprey nests; landbird monitoring; 12 northern spotted owl nest territories; 23 bald eagle nest territories and four mid-winter trend routes; the Wood River Wetland Oregon spotted frog sites; 8 northern goshawk nest territories; and 6 golden eagle nest territories.</p>
<b>Prescribed Burns</b>	Bly Mountain pile burning, Klamath River Canyon Underburn, Chew landing pile burning, and Wright Creek pile burning.
<b>Grazing Projects</b>	16 existing improvements (fences, spring improvements) and 40 grazing allotments (studies and use supervision)
<b>Water &amp; Soil Projects</b>	<p>Monitoring of spring flow in the Gerber Block; water temperature monitoring in the Gerber watershed, Klamath River, Spencer Creek, Johnson Creek, and Fourmile Creek; riparian photo points throughout the resource area. Flow monitoring and culvert performance at the new open bottom Spencer Creek Culvert Replacement, a Title II project completed in 2006, was monitored for site stabilization and erosion potential.</p> <p>Chew timber sale was monitored in 2011 to determine soil disturbance RMP compliance.</p>
<b>Juniper Projects</b>	Horse Camp Rim North and South, and Bly Mountain.

**Table B - FY 2012 Implementation Monitoring Selection Categories**

<b>Selection Categories</b>	<b># of Projects</b>	<b># Monitored</b>	<b>% Monitored</b>
Ground-Disturbing Activities (other than timber sales)	3	3	100%
Grazing Allotments	94	40*	43%
Projects in Riparian Reserves	2	2	100%
Removing Structures within Riparian Reserves	0	0	N/A
Projects in Late Successional Reserves	0	0	100%
Timber Sales in Watersheds With <15% Late Success. Forest	0	0	N/A
Timber Sales (Harvesting completed)	3	3	80%
Fuel Projects	2	2	100%
Projects Within or Adjacent to Special Areas	2	2	100%
Projects in VRM II or III Areas	3	3	100%
Projects Within or Adjacent to Wild & Scenic River Corridors	1	1	100%
Projects in Rural Interface (prescribed fire)	1	1	100%
Noxious Weed Project (sites)	36	36	100%
Prescribed Burn Projects	8	8	100%
Projects That Required Dust Abatement	3	3	N/A

Note: Minimum monitoring requirement in each listed category is 20%. The district exceeded the minimums in numerous categories, primarily due to overlapping applicability (many projects meet several criteria in above table).

\* Includes one or more of the following monitoring studies or activities: utilization, use supervision, condition, trend, actual use, photo points, range/riparian studies.

**Discussion of Discrepancies****Timber Harvest Acres - Discrepancies from the RMP:**

Table M-3 compares projected volume and acres to actual volume and acres harvested to date. While the total volumes harvested are in line with the RMP, the number of acres yielding that volume was higher than predicted on the Westside. A combination of factors has contributed to this discrepancy. Regeneration harvests were expected to result in higher yields per acre than other treatments. In lieu of regeneration harvests, approximately 21 percent of the volume to date has come from mortality salvage sales and the remaining from density management/uneven-aged harvests. Typically, mortality salvage harvests consist of removing less volume per acre but treating more acres than regeneration harvests.

Cumulative information on timber harvest acres, volumes, and harvest types since the beginning of the RMP are provided in Table M-4. Except for the District declared Allowable Sale Quantity, projections made in the RMP are not intended as management action/ direction, but rather are underlying RMP assumptions. Projected levels of activities are the approximate level expected to support the Allowable Sale Quantity.

Unresolved litigation and uncompleted strategic surveys under Survey and Manage limited the ability to offer timber sales at the levels anticipated by the RMPs during Fiscal Year 2001 and in some prior years. The KFRA has been able to make up the shortfall in volume sold in recent years. The Western Oregon O&C Districts, including the KFRA, revised their Resource Management Plans including reassessment of the assumptions used to generate an Allowable Sale Quantity. The revised RMP Record of Decision was issued and then rescinded in FY 2009. The KFRA will continue to implement the 1995 RMP Allowable Sale Quantity.

**Wildlife Discrepancies:**

As part of the RMP, it was planned to treat 1/4 of the brushfields in each allotment during a decade. Treatment, in this case, meant returning the brushfield to an early seral state or rejuvenating it through extensive use of mechanical, manual or fire treatments. The acre figures noted in the Grazing EIS were based on 1/4 of the acres of identified mature brushfield in

each allotment. Since the RMP was approved, the range inventories have shown the need for more treatment acres to simply maintain existing sagebrush stands in optimum condition. The treatments did not result in as extensive ground disturbance as originally proposed, but may cover more acres per allotment.

The prescribed fire EA (Environmental Assessment OR-014 94-09) was incorporated into the RMP and proposed treating up to 10,000 acres. Currently, the projects proposed to treat excess fuels under the Fire EA, treat some of the same allotments where brushfields are scheduled to be managed. Fuels management treatments were also analyzed in the RMP.

Therefore, there may be more acres treated in each allotment than is covered in Appendix H of the RMP. However, since the types of treatments have been analyzed in the RMP and the disturbance per acre is less than previously predicted, the impacts are well within those analyzed in the RMP.

The number of acres treated in large blocks for density management purposes may have a negative effect upon deer and elk and other species dependent upon the understory components of a stand for cover. In order to provide some variation in the stand density across the landscape, small clumps of trees were retained within the sale areas. The number and acreage of clumps retained was dependent upon the importance of an area to deer and elk and upon the original characteristics of the stand. The combination of these clumps and reserve areas such as Riparian Reserves comprise up to 20 percent of the harvested acres for a given entry. Some of these “wildlife clumps” are comprised primarily of white fir and are overstocked. These “wildlife” clumps may be treated during subsequent harvest entries and are not considered to be permanent reserves. For the sales within the third year evaluation time frame, all wildlife clumps were less than an acre. For the period beyond this evaluation period, larger clumps of up to 15 acres may be retained. The decision not to thin these areas may result in an increase in the number of snags and thus result in a potential benefit to woodpeckers, secondary cavity nesters and bats. No evaluation of the use of these wildlife clumps by wildlife has been made to date.

**Table C - Projected vs. Actual Harvest Volumes and Acres to Date**

Harvest Method	WESTSIDE		EASTSIDE					
	Volume(MMBF)*		Acres		Volume(MMBF)		Acres	
	Projected	Actual	Projected	Actual	Projected	Actual	Projected	Actual
Density Management	106.38	97.84	17,262	26,404	7.20	7.54	4,842	4,574
Regeneration Harvests**	34.02	5.73	2,358	260	0.00	0.00	594	0
Mortality Salvage	0.00	19.48	0	7,444	0.00	1.75	0	1,205
<b>Totals</b>	<b>140.4</b>	<b>123.05</b>	<b>19,620</b>	<b>34,108</b>	<b>7.2</b>	<b>9.30</b>	<b>5,436</b>	<b>5,779</b>

\*MMBF = Million Board Feet

\*\*Westside/eastside projected and actual volumes are combined figures for Density Management, Regeneration Harvest, and Stewardship volumes.

\*\*\*Actual exceeds Projected because the KFRA offered 2.5MMBF of volume on the eastside in 2005, which equates to approximately 5-6 years of volume for estimated ASQ on the eastside.

**Table D - Timber Sale Volume and Acres Offered (Entire Resource Area)****Total Timber Volume – MBF (Thousand Board Feet)**

	Westside		Eastside		Combined		Annual Average	Assumed Ann. AVe.	% Assumed Ave.
	FY12	FY95-12	FY12	FY95-12	FY12	FY95-12			
Total Timber Sale Program	7,068	97,836	-81	7,545	6,988	105,380			
Total Matrix Timber Sales	6,555	96,503	-81	7,438	6,475	103,940	5774	6310	92%
Total All Reserves	513	1,333	0	107	513	1,440	80		
Total Key Watersheds	4,356	59,321	0	0	4,356	59,321	3296		
Total Regeneration Harvests	3	5,731	0	0	3	5,731	318		
Total Density Mgt	6,550	68,549	-81	5,622	6,469	74,171	4121		
Total Mortality Salvage	0	19,253	0	1,606	0	20,859	1159		
Total Small Sales	0	80	0	74	0	154	9		
Total R/W Clearing	3	146	0	72	3	218			
Total UMLSR	365	387	0	0	365	387			
Total RR	148	563	0	51	148	614			
Total Admin Withdrawal	0	84	0	56	0	140			
Forested Stewardship Volume - Regulated	0	2,744	0	64	0	2,808			
Forested Stewardship Volume - Non-Regulated	0	299	0	0	0	299			
Juniper Sawlog Volume (MBF)	0	0	0	1,576	0	1,576			
Juniper Sawlog Volume (Tons)	0	0	1,701	1,701	1,701	1,701			
Forested Stewardship Bio- mass- Hog Fuel (Tons)	8,533	28,912	9,654	19,827	18,187	48,739			
Stewardship Clean Chip Volume (Tons)	0	3,628	6,676	22,041	6,676	25,669			

**Total Timber Sale Acres**

Total Timber Sale Program	2,500	26,840	0	4,655	2,500	31,495			
Total Matrix Timber Sales	2,351	26,404	0	4,574	2,351	30,978	1721	1261	136%
Total All Reserves	149	436	0	41	149	477			
Total Key Watersheds	1,162	13,544	0	0	1,162	13,544			
Total Regeneration Harvests	1	260	0	0	1	260	14	164	9%
Total Density Mgt	2,349	17,510	0	3,319	2,349	20,829	1157	1097	105%
Total Mortality Salvage	0	7,438	0	1,154	0	8,592	477		
Total Small Sales	0	1	0	20	0	21			
Total R/W Clearing	1	5	0	31	1	36			
Total UMLSR	96	98	0	0	96	98			
Total RR	53	180	0	39	53	219			
Total Admin Withdrawal	0	50	0	2	0	52			
Forested Stewardship Acres - Regulated	0	1,190	0	50	0	1,240			
Forested Stewardship Acres - Non-Regulated	0	108	0	0	0	108			
Juniper Sawlog Volume Acres Yarded	0	0	0	1,212	0	1,212			
Stewardship Biomass Hog Fuel Volume Acres Yarded	0	162	0	386	0	548			
Stewardship Clean Chip Volume Acres Yarded	0	435	0	2429	0	2864			
Stewardship Biomass Volume Acres Yarded	0	0	4226	4226	4226	4226			

## M.2 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

**Monitoring Question 1:** Are surveys for the species listed in Appendix E (RMP/EIS) and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) conducted before ground-disturbing activities occur?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, 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 E are protected.

**Monitoring Performed:** Surveys for Survey and Manage species continued in FY 2012. Surveys were conducted for the Keno and most of the Hayden Fox project areas. Surveys for the remaining portions of Hayden Fox are planned to be accomplished in the spring/summer of 2013, prior to finalization of the EA. The emphasis of the survey effort is on Threatened and Endangered, Survey and Manage, and BLM Sensitive Species

#### Findings (for all activities):

##### Animals

###### *White-headed Woodpecker*

Surveys for this species have a low detection rate, and are not required. None were performed in 2012. We rely on timber sale prescriptions and project design features to retain habitat for this species in and adjacent to timber sale units.

###### *Great Gray Owl*

Surveys for Great gray owls were completed in 2012 for KENO and most of the Hayden Fox project areas. Surveys for the remaining portions of Hayden Fox are planned to be accomplished in the spring/summer of 2013- prior to finalization of the EA. No nest sites were detected.

###### *Mollusks*

Surveys were conducted for the Keno and most of the Hayden Fox project area in 2012 for survey and manage category terrestrial mollusks. Surveys for the remaining portions of Hayden Fox are planned to be accomplished in the spring/summer of 2013- prior to finalization of the EA. No sites for survey and manage species were located in the project areas to date.

##### Plants

###### *Fungi*

Fungi Surveys were conducted on approximately 1,033 acres in 2012. None were found.

###### *Vascular Plants*

Surveys for special status, including Interagency Special Status / Sensitive Species Program (ISSSSP) vascular plant species covered 10,000 acres in the KFRA in 2012. None were found.

**Conclusions:** Surveys for Threatened and Endangered, Survey and Manage and Bureau Sensitive species are typically conducted prior to ground disturbing activities.

**Monitoring Question 2:** Are protection buffers being provided for specific rare and locally endemic species and other species in the upland forest matrix?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, 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 E are protected.

**Monitoring Performed:** LOST Analysis EA

**Findings:**

**Animals**

All required surveys for Survey and Manage and other special status species were completed. No sites were identified and no buffers were necessary. Objectives for species protection were met in the Lost EA planning area.

**Plants**

*Fungi*

No special status fungi were found, therefore no buffers were required.

*Vascular Plants*

No special status vascular plants were found, therefore no buffers were required.

**Conclusions:** The required management actions for specific rare, and locally endemic, species, and other species in the upland forest matrix, are being implemented.

**Monitoring Question 3:** Are the known sites of amphibians, birds, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E (FEIS) and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) being protected?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, 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 E are protected.

**Monitoring Performed:** LOST Analysis EA

**Findings:** See answer to Monitoring Question 2 above.

**Conclusions:** Known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP and/or Table 1-1 of the Standards and Guidelines (S&M SEIS) are being surveyed and protected.

**Monitoring Question 4:** Are the known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP being surveyed?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, 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 E are protected.

**Monitoring Performed:** Keno and Hayden Fox EAs

**Findings** Surveys for SEIS species continued in FY 2012. Surveys were conducted for the Keno EA and most of the Hayden Fox areas. The emphasis is on Survey and Manage and BLM Sensitive Species. Surveys for the remaining portions of Hayden Fox are planned to be accomplished in the spring/summer of 2013, prior to finalization of the EA.

**Conclusions:** Known sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix E of the RMP are being surveyed.

**Monitoring Question 5:** Are high priority sites for species management being identified?

**Monitoring Requirement:** At least 20 percent of all ground-disturbing management actions will be examined prior to project initiation and reexamined following project completion, to determine if surveys are conducted for species listed in Appendix E, 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 E are protected.

**Monitoring Performed:** LOST Analysis EA

**Findings:**

**Animals**

*Mollusks*

See response to monitoring question #2 above.

**Plants**

**Fungi**

No high priority sites were found.

**Vascular Plants**

No high priority sites for fungi were found.

**Conclusions:** High priority sites for species management are being identified. High priority species are managed the same as manage all known sites species.

## Late-Successional Reserves

### Expected Future Conditions and Outputs

- Development and maintenance of a functional, interacting, Late-Successional, and old-growth forest ecosystem in Late-Successional Reserves
- Protection and enhancement of habitat for Late-Successional and old-growth forest-related species including the northern spotted owl

### Implementation Monitoring

**Monitoring Question 1:** What is the status of the preparation of assessments and fire plans for Late-Successional Reserves?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #1.

**Monitoring Performed:**

The status of the development of the resource area wide LSR assessment was reviewed.

**Findings:** A single Late-Successional Reserve Assessment was prepared in FY 2003 that

assesses all 19 of the reserves designated for late-successional forest values within the resource area. Data on current conditions within each of the reserves had been collected in previous fiscal years. Along with historical descriptions and harvest data, these data served as a basis for written assessments of conditions in each reserve. The Late-Successional Reserve Assessment was submitted to the Regional Ecosystem Office (REO) for review and approval in the spring of 2003. In a memorandum dated September 27, 2004, the Regional Ecosystem Office, based upon the final review of the LSR Assessment by the LSR Work Group, concurred with the Klamath Falls Resource Area in its findings and consistency with the Standards and Guidelines (S&Gs) under the Northwest Forest Plan (NWFP).

**Conclusion:** RMP requirements will be met.

**Monitoring Question 2:**

A) What activities were conducted or authorized within Late-Successional Reserves (LSRs) and how were they compatible with the objectives of the LSR plan?

B) Were the activities consistent with SEIS ROD Standards and Guides, RMP management direction, and Regional Ecosystem Office review requirements and the LSR assessment?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #2.

**Monitoring Performed:** Review of activities conducted or authorized within Late-Successional Reserves (LSRs).

**Findings:** No activities in LSR's were conducted or authorized in FY 2010.

**Conclusion:** N/A

**Monitoring Question 3:** What is the status of development and implementation of plans to eliminate or control non-native species, which adversely impacts LSRs?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question #3.

**Monitoring Performed:** Review of species lists from each unmapped LSR, and review of the noxious weed management program.

**Findings:** Noxious weed management is not a habitat manipulation activity that requires a Late-Successional Reserve Assessment before implementation. Standards and Guides for LSRs direct us to evaluate the impacts of nonnative species currently within reserves, and to develop plans for control or elimination of species that are inconsistent with LSR objectives.

**Conclusion:** Impacts of nonnative species have been evaluated, and the species that currently exist within the reserves, are not inconsistent with LSR objectives. Noxious weed management activities and prevention strategies on lands near and adjacent to late-successional reserves will reduce the probability that other nonnative species will become established within the reserves.

**Monitoring Question 4:**

A) Are the effects of existing and proposed livestock management and handling facilities in Late-Successional Reserves being evaluated to determine if LSR objectives are met?

B) Are livestock management and/or handling facilities relocated where LSR objectives are not met?

**Monitoring Requirement:** The Annual Program Summary will report the status of evaluations of existing and proposed livestock management facilities inside LSRs, to determine if reserve

objectives are being met. The APS will report on the status of relocating those facilities where LSR objectives cannot be met.

**Monitoring Performed:** Review of existing and proposed livestock management facilities within the resource area.

**Findings:** No existing or proposed livestock management facilities are located within LSRs in the resource area.

## Matrix

### Expected Future Conditions and Outputs

- Production of a stable supply of timber and other forest Commodities.
- Maintenance of important ecological functions such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components such as downed logs, snags, and large trees.
- Assurance that forests in the Matrix provide for connectivity between mapped Late-Successional Reserves.
- Provision of habitat for a variety of organisms associated with early and Late-Successional forests..

### Implementation Monitoring

**Monitoring Question 1:** Are suitable numbers of snags, coarse woody debris, and green trees being left, following timber harvest, as called for in the SEIS ROD Standards & Guidelines and RMP management direction?

**Monitoring Requirements:** At least 20 percent of timber sales in the resource area will be examined by pre- and post-harvest (and after site preparation) inventories 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 be inventoried pre- and post-harvest to determine if SEIS Record of Decision and RMP down log retention direction and protection buffers for special status and SEIS special attention species have been followed.

**Monitoring Performed:** Table M-5 displays all the timber sales that have been monitored from FY 1997 through FY 2012.

**Findings:** Results of prior year timber sale monitoring are shown in earlier Annual Program Summaries. Table M-6 summarizes the stand attribute data that was gathered from post-treatment stand exams.

**Table M5 - Timber Sale Monitoring Summary**

<b>FY</b>	<b>Timber Sale Name</b>	<b>Acres</b>	<b>Monitored By</b>	<b>Pre/Post Treatment Stand Exams Completed</b>	<b>Soil Monitoring Completed</b>
1997	Too Frosty	459	KFRA ID Team	Yes	Post Treatment Only
1998	Lower Spencer Salvage	1,000+	REO & KFRA ID Team	No	No
1999	Kakapoo Stew	397	REO & KFRA ID Team	Yes	Pre & Post Treatment
2000	Stukel Mountain	230	KFRA ID Team	Yes	No
2001	Grenada East	1,440	Silviculture/Wildlife/Timber	Yes	Post Treatment Only
2001	Grenada West	1,003	Silviculture	Pre-treatment	No
2001	Slim Chicken	2,113	Silviculture	Yes	No
2001	Muddy Tom	400	Soils	Yes	Pre Treatment
2002	Muddy Tom	1,880	Timber and Silviculture	Yes (some)	GPS Skid Trails
2002	Bull Sp. Fire Salv. Modif.	84	KFRA ID Team	Yes (ongoing)	No
2002	Clover Hookup	940	Silviculture and Timber	Yes	Snow Logging Photo Pts
2003	Bly Mountain	631	Silviculture	Yes	Pre & Post Treatment
2004	Grenada West	1,003	Silviculture	Yes (ongoing)	No
2005	CHEW	1,158	Silviculture	Yes	No
2005	Muddy Tom	400	Soils	NA	Post Treatment
2005	Saddled Again	200	Soil / Snow Logging	NA	Post Treatment
2006	Chase Mountain (Sec. 5)	447	Silviculture/Timber	Yes	No
2006	Thin Sheep	590	Wildlife/Timber	Pre-treatment	No
2007	Thin Sheep	590	Wildlife/Timber	Yes	No
2007	Buck Again	850	Wildlife	Pre-treatment	No
2007	Pleasant Valley Salvage	115	Timber	No	No
2008	Walters Cabin	578	Timber	Yes	No
2009	Adobe West	1,720	Silviculture/Timber	Pre-treatment	No
2009	Wildgal	700	Silviculture	Pre-treatment	No
2009	West Spencer	500	silviculture	Pre-treatment	No
2010	W. Spencer	500	Silviculture	Pre-treatment	No
2010	Mid Spencer	596	Silviculture	Pre-treatment	No
2010	Slim Chicken	2162	Silviculture	Post-Treatment	No
2010	CHEW	1158	Silviculture	Post-Treatment	No
2011	Slippery Topsy	1937	Silviculture	Pre-treatment	No
2011	Ham and Chase	795	Silviculture	Pre-treatment	No
2011	Buck 13	28	Silviculture	Post-Treatment	No
2012	Replacement Gal	239	Soils	No	Yes
2012	Buck 15	467	Silbiculture	Post-Treatment	No

**Table M.6 - Summary of Post-Treatment Stand Characteristics for the Buck 15 Timber Sale**

**Buck 15 TS**

**Density Management Unit**

<b><u>Stand Attributes</u></b>	<b>Total</b>	<b>SE%</b>
Canopy Closure(%)	43	
Basal Area/Acre (Sq. Ft./Ac.)	123	5
Number of Merchantable (>7") Trees/Acre	73	9.3
0"-6" DBH	110	
7"-18" DBH	52	
19"-30" DBH	15	
>30" DBH	5	
	WF 60%, SF 28%, PP 5%, DF 2%, WWP	
Tree Species composition (BA)		2%
Fuel Loading (Tons/acre, logs>8"x 8')	4.2	

**Coarse Woody Debris (total ft/acre)**

Decay Class 1 and 2	74.7
Decay Class 3, 4 and 5	423
All Decay Classes	497.6

**Snags/Acre**

	<b>7-16" DBH</b>	<b>16"+ DBH</b>
Class 1 and 2 Snags (>51' ht)	0.3	0.2
Class 1 and 2 Snags (<50' ht)	0	0
Class 3,4 and 5 Snags (>51' ht)	0.7	0.8
Class 3,4 and 5 Snags (<50' ht)	3	3
<b>Totals</b>	<b>4</b>	<b>4</b>

**Regen/Patch cut units**

<b><u>Stand Attributes</u></b>	<b>Total</b>	<b>SE%</b>
Canopy Closure(%)	15	
Basal Area/Acre (Sq. Ft./Ac.)	40	25
Number of Merchantable (>7") Trees/Acre	24	64
0"-6" DBH	0	
7"-18" DBH	38	
19"-30" DBH	6	
>30" DBH	2.7	
Tree Species composition (BA)		WF 58%, SRF 33%, PP 8%
Fuel Loading (Tons/acre, logs>8"x 8')	21.5	

**Coarse Woody Debris (total length/acre)**

Decay Class 1 and 2	0
Decay Class 3 and 4	2806.4
All Decay Classes	2806.4

**Snags/Acre**

	<b>7-16" DBH</b>	<b>16"+ DBH</b>
Class 1 and 2 Snags (>51' ht)	0	0.5
Class 1 and 2 Snags (<50' ht)	0	0
Class 3,4 and 5 Snags (>51' ht)	2.7	0
Class 3,4 and 5 Snags (<50' ht)	6.2	8.7
<b>Totals</b>	<b>8.9</b>	<b>9.2</b>

### **Snags**

The KFRA RMP requires leaving approximately 1.9 snags per acre (1.4 eastside) to meet the 60 percent optimum cavity nesting habitat for cavity nesters. An additional 0.7 snags per acre must also be left to meet the protection buffer requirement for white-headed and black-back woodpeckers. Snags for the white-headed woodpecker need to be at least 15 inches DBH and in the soft (Class 3,4 and 5) category. For the black-backed woodpecker, the snags must be at least 17 inches DBH and in the hard (Class 1 and 2) category. Silvicultural prescriptions in the KFRA have generally called for leaving a total of 2.6 snags per acre (1.4 eastside) or more with at least one greater than 20 inches DBH. The table above indicates that both units have sufficient snags/acre to meet both RMP requirements and woodpecker habitat requirements. No snags were marked for removal under either timber sale so there should be little change in the total number of snags between pre and post harvest. Generally under a timber sale, only snags that present a risk to operations are cut per requirements under Occupational Safety and Health Administration (OSHA).

### **Coarse Woody Debris (CWD)**

For KFRA westside lands within the boundaries of the NFP, page C-40 of the Northwest Forest Plan Record of Decision (ROD) states, *“Until standards are developed as described above, the following guidelines apply in areas of regeneration harvests:…In eastern Oregon and Washington and western Oregon south of the Willamette National Forest and the Eugene BLM District, a minimum of 120 linear feet of logs per acre greater than or equal to 16 inches in diameter and 16 feet long should be retained. Decay class 1 and 2 logs can be counted towards these totals. Down logs should reflect the species mix of the original stand. In all cases, standards and guidelines from current plans and draft plans preferred alternatives apply if they provide greater amounts. In areas or partial harvest, the same basic guidelines should be applied, but they should be modified to reflect the timing of stand development cycles where partial harvesting is practiced.”* For eastside lands in the KFRA which are not under the NFP guidelines, the KFRA RMP standard is 50 linear feet of logs per acre greater than or equal to 12 inches in diameter and 8 feet long in **regeneration harvest** areas only.

The table above indicates that both units have a sufficient amount of coarse woody debris to meet RMP requirements. Qualitative observations indicate that CWD in the mature, natural stands is primarily a result of on-going insect, disease, and wind throw-related mortality.

### **Green Tree Retention**

The RMP requires that an average of 16 to 25 Westside (5-10 eastside) large green trees per acre be left. Plan maintenance (see 1999 APS) clarification indicates that this requirement is for regeneration harvests only. Over the past fourteen years, the KFRA has implemented 259 acres of regeneration harvest on the westside and none on the eastside. Most harvest prescriptions have consisted of either density management/uneven-aged management or mortality salvage. In both prescriptions, a majority of the large green trees are retained. With the exception of regeneration harvest areas, the KFRA intends to implement uneven-aged management prescriptions, maintain late-successional structural components, and address forest health issues in the Matrix. That is why the stand exam data reveals a complete array of tree sizes.

### **Tree Species Composition**

The KFRA is tracking species composition changes through pre- and post-treatment stand exams to help determine trends in species composition changes. An objective in most silvicultural prescriptions is to retain the more desirable species, including healthy pines and Douglas-fir. Eastside stands are predominantly ponderosa pine with scattered juniper and some white fir and cedar.

Many of the mixed conifer stands contain a higher percentage of shade tolerant species (white fir) than historically found (Leiburg, 1899). This is primarily a result of past

harvesting practices—where many of the overstory pines and Douglas-fir were removed—and fire suppression, which tends to favor the shade tolerant white fir. Historical data has shown that this area was 40-60% ponderosa pine, 22-55% Douglas fir, 5-15% sugar pine, and < 2% of a combination of white fir and incense cedar. Post treatment data for the Buck 15 sale is shown in the table above.

### **Canopy Closure**

The KFRA is monitoring canopy closure changes through pre- and post-treatment stand exams. Biologists often use canopy closure as one stand variable to assist in evaluation of whether a particular stand meets nesting, roosting, or foraging habitat for different species. To date, using the density management/uneven-aged management prescription, canopy closure after harvest on westside timber sales has averaged 50 to 86 percent, which is a level that meets the requirements for some late-successional dependent species.

### **Basal Area/Relative Density**

The KFRA monitors basal area and relative density changes for a number of reasons. There has been considerable research on optimizing stand densities and growth using basal area and relative density to monitor stand stocking levels and to prevent the on-set of density related mortality in overstocked stands. The Growth and Yield Model (ORGANON) that was used to help determine the ASQ is highly dependent upon basal area levels before and after harvest to predict and maintain growth rates. The silvicultural prescriptions for all harvests contain basal area objectives. Pre- and post-treatment monitoring is done to determine if those silvicultural objectives were met. There has been a significant amount of research, particularly on drier sites, determining basal area levels where stands are most susceptible to insect outbreaks. The KFRA uses these threshold levels in the silvicultural prescriptions to assure that treatments are adequate to improve the overall resiliency of the stand against natural disturbances including insects and diseases as well as wildfire. Generally, the higher elevation stands have a higher basal area threshold than the drier, low elevation stands. The objective for this sale was to retain, on the average, between 60 and 120 square feet of basal area per acre

### **Conclusion:**

The FY 2001 annual program summary contained some clarification in the Plan Maintenance addressing the requirement of leaving an average of 16 to 25 large green trees in regeneration harvests only. The KFRA has complied with the snag, coarse woody debris, and green tree requirements to date. A quality control program has been initiated to assure that silvicultural prescriptions modeled are actually being implemented on the ground. Post-harvest monitoring of timber sales indicates retention of many desirable late-successional characteristics. The wildlife staff is monitoring biological use of post treatment stands by late-successional dependent species (see Wildlife Section).

**Monitoring Question 2:** Are timber sales being designed to meet ecosystem goals for the Matrix?

**Monitoring Requirements:** At least 20 percent of the files on each year's timber sales within Matrix will be reviewed annually to determine if ecosystem goals were addressed in the silvicultural prescription.

**Monitoring Performed:** Monitoring is completed on at least one timber sale per year. Table M-5 displays sales monitored from FY 1997 through 2012.

**Findings:** All timber sales are designed to meet ecosystem goals for the Matrix and address resource concerns raised in both the respective Watershed Analysis and Environmental Assessment. All resources are analyzed for impacts including wildlife, soils, hydrology, plants, social, cultural, as well as others. All timber sales incorporate the applicable Best Management

Practices (BMPs) described in Appendix D of the RMP. Post-treatment monitoring of all sales to date indicates that most BMPs have been addressed in the Environmental Analysis and incorporated into the Timber Sale Contract.

**Monitoring Question 3:** Are late-successional stands being retained in fifth-field watersheds in which federal forest lands have 15 percent or less late-successional forest?

**Monitoring Requirements:** All proposed regeneration harvest timber sales in watersheds with less than 15 percent late-successional forest remaining will be reviewed prior to sale to ensure that a watershed analysis has been completed.

**Monitoring Performed:** A 15% analysis has been completed.

**Findings:** For all three Watershed Analyses, an analysis was done to determine the amount of Late-Successional Forest in the watershed on federal lands. For both the Spencer Creek Watershed and the Topsy/Pokegama/Hamaker Landscape Analysis Area, the percent of Late-Successional Forest in the watershed was above 15%.

One unique feature of the KFRA, as indicated by post-treatment monitoring thus far, is that many of the stands after harvest/treatment are still capable of contributing to late-successional habitat and providing connectivity within the watershed due to the residual stand characteristics being left. Silvicultural prescriptions have been implemented that addressed two primary objectives: first, maintenance of late-successional habitat; and second, improve stand resiliency to insects, disease and wildfire by thinning overstocked stands and reducing hazardous fuels. There are some watersheds where the residual late-successional habitat may be close to 15% and still experiencing forest health concerns that could benefit from some light understory treatments.

## Riparian Reserves

### Expected Future Conditions and Outputs

(See also Aquatic Conservation Strategy Objectives)

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

#### Implementation Monitoring

**Monitoring Question 1:** Are watershed analyses being completed before on-the-ground actions are initiated in Riparian Reserves?

**Monitoring Requirement:** The files for each year's on-the-ground actions will be checked annually to ensure that watershed analyses were completed prior to project initiation and to ensure the concerns identified in the watershed analysis were addressed in the project's Environmental Assessment (EA).

**Monitoring Performed:** Review of project files and EAs.

**Findings:** Watershed analyses have been completed for most areas in the KFRA that contain substantial riparian areas. Since the completion of the Gerber-Willow Valley Watershed Analysis, planning and implementation of projects recommended for riparian areas has progressed.

**Conclusions:** Watershed analyses were completed for all projects having activities within Riparian Reserves. Recommendations and objectives of the watershed analysis were addressed in the EAs and in contract stipulations.

**Monitoring Question 2:** Is the width and integrity of the Riparian Reserves (RR) being maintained?

**Monitoring Requirement:** At least 20 percent of management activities within the KFRA will be examined prior to project initiation and reexamined following project completion, to determine whether the width and integrity of the Riparian Reserves (RRs) were maintained.

**Monitoring Performed:** In FY 2012, approximately 30 acres of riparian reserves were delineated adjacent to perennial streams within the planned Cold Creek and Onion Springs Timber Sale Units.

**Findings:** The widths of these reserves comply with management direction in the KFRA RMP. Management activities conducted within riparian reserves to date have maintained the integrity of these reserves.

**Conclusions:** Riparian reserves were delineated properly.

**Monitoring Question 3:** What silvicultural practices are being applied to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain ACS objectives?

**Monitoring Requirements:** The Annual Program Summary will report what silvicultural practices are being applied in order to attain ACS objectives. See the Watershed Restoration Projects and Riparian Habitat Enhancement section, for a description of the silvicultural prescriptions applied.

**Monitoring Performed:** Post treatment monitoring of hand cut and piled juniper within riparian buffers in tributary streams to Gerber Reservoir to insure contract specifications were met.

**Findings:** Implementation of understory thinning and juniper treatment projects will help attain ACS objectives.

**Monitoring Question 4:** Are management activities in riparian reserves consistent with SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives?

**Monitoring Requirement:** At least 20 percent of the activities that are conducted or authorized within Riparian Reserves will be reviewed in order to identify whether the actions were consistent with the SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives. 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:** No harvest or pre-commercial thinning occurred in riparian reserves in 2012.

**Findings:** This information will help in assessing the consistency of management actions with planning direction. It will also provide useful guidance for the design and implementation of future projects within riparian reserves. Monitoring data will provide a baseline for post-treatment analysis of long-term trend.

**Conclusion:** Monitoring results to date show that the silvicultural activities were consistent with the SEIS Record of Decision Standards and Guidelines, RMP management direction, and ACS objectives.

**Comment/Discussion:** See the Aquatic Conservation Strategy section of the Annual Program Summary for a discussion of the activities that were conducted or authorized in riparian reserves.

**Monitoring Question 5:** Are new structures and improvements in riparian reserves constructed to minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations, and accommodate the 100-year flood?

**Monitoring Requirement:** All new structures and improvements within a Riparian Reserve will be monitored during and after construction to ensure that it was constructed to: minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations and accommodate the 100-year flood.

**Monitoring Performed:** Post-treatment photo monitoring was performed on the Spencer Creek Helicopter Log Placement Project in FY 2010. Fish and geomorphic parameters were measured in 2004 and repeated in 2007 and 2008 to determine effectiveness of the previous ground-based log placement project in improving fish habitat. Spencer Creek culvert replacement for improvement of fish passage was implemented in 2006. Post project flow monitoring was done and a staff gage placed below the culvert to monitor discharge.

**Conclusion:** Monitoring results will not be meaningful until several years of high flow act on placed large wood, effect sediment processes and cause pool scour. Preliminary results indicate that large wood placement was effective in meeting the goals and objectives of the project including higher fish/amphibian biomass, retention of spawning gravel deposits, and increase in habitat complexity.

**Monitoring Question 6:**

A) Are all mining structures, support facilities and roads located outside the Riparian Reserves?  
B) Are those located within the Riparian Reserves meeting the objectives of the Aquatic Conservation Strategy?

C) Are all solid and sanitary waste facilities excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with Supplemental Environmental Impact Statement Record of Decision Standards and Guidelines, and resource management plan management direction?

**Monitoring Requirement:** All approved mining Plans of Operations will be reviewed to determine if: A) both a reclamation plan and bond were required, B) structures, support facilities and roads were located outside of Riparian Reserves, or in compliance with management action/direction for Riparian Reserves if located inside the Riparian Reserve, C) and if solid and sanitary waste facilities were excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with RMP management direction.

**Monitoring Performed:** None; there are no mining claims in the Klamath Falls RA.

**Monitoring Question 7:** Are new recreation facilities within the Riparian Reserves designed to meet, and where practicable, contribute to Aquatic Conservation Strategy Objectives? Are mitigation measures initiated where existing recreation facilities are not meeting Aquatic Conservation Strategy Objectives?

**Monitoring Performed:** An evaluation of existing recreation facilities inside Riparian Reserves has not been completed to date.

**Monitoring Question 8:** Are new livestock handling and/or management facilities located outside Riparian Reserves? Are existing livestock handling and/or management facilities within the Riparian Reserves meeting the Aquatic Conservation Strategy Objectives?

**Monitoring Performed:** Riparian enclosure fences are the only type of livestock handling and/or management facilities present or proposed in Riparian Reserves. The primary purpose for development of these projects is to meet Aquatic Conservation Strategy objectives.

## M.3 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 are randomly selected for monitoring to assess what efforts were made to minimize particulate emissions, and whether the environmental analysis that preceded the decision to burn addressed the questions set forth in the SEIS discussion of Emission Monitoring (pages 3&4-100).

**Monitoring Performed:** On every prescribed burn project, smoke plume was documented by the burn boss and/or fire monitor during implementation. Particulate matter concentration was monitored in Klamath Falls by the automated nephelometer at Peterson School.

**Findings:** Burns were conducted when the atmosphere was unstable and transport winds favorable; thereby decreasing the impact of smoke in sensitive areas. As related to harvest units, logging methods required the yarding of tops and limbs attached. Some of this material was chipped and utilized. The material not in locations suitable to chipping were burned in the winter to provide for complete and quick consumption. Where feasible, sheared juniper was removed from the site for utilization rather than burning.

**Conclusion:** Efforts were made to reduce particulate emissions from prescribed burns and still meet hazard reduction objectives by conducting burns with higher fuel loads in the spring.

**Monitoring Question 2:** Are dust abatement measures used during construction activities and on roads during BLM timber harvest operations and other BLM commodity hauling activities?

**Monitoring Requirements:** At least 20 percent of the construction activities and commodity hauling activities conducted and subject to the current RMP will be monitored to determine if dust abatement measures were implemented where needed.

**Monitoring Performed:** The Replacement Gal and Onion Springstimmer sales were monitored in 2012 during harvest operations.

**Findings:** All timber sales in the Klamath Falls Resource Area include a road watering specification as part of the contract. Water is required to abate dust during any road construction phase of the contracts. Impacts on air quality from road construction and timber hauling were of short duration, local nature, and had little impact on regional air quality. Where feasible, slash material that would normally be burned in landing piles is chipped for use in biomass energy production, thereby reducing emissions including particulates.

**Monitoring Question 3:** Are conformity determinations being prepared prior to activities, which may contribute to a new violation of the national Ambient Air Quality Standards, increase the frequency or severity of an existing violation, or delay the timely attainment of a standard?

**Monitoring Requirements:** The annual program summary will address Implementation Question 3.

**Monitoring Performed:** In FY 2012, the Klamath Falls PM2.5 NAAQS was never exceeded as a probable result of KFRA activities. No intrusion reports were filed on any KFRA burning activities.

**Findings:** Preplanning of prescribed fire projects, use of current weather data, and onsite observations during prescribed burning have reduced frequency and severity of smoke from prescribed fire violating Air Quality Standards.

## M.4 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, identified as applicable during interdisciplinary review, carried forward into project design and execution?

**Monitoring Requirement:** All management activities using best management practices will be monitored to determine whether best management practices are incorporated into the project design. At least twenty percent of the timber sales, silviculture projects, or other ground disturbing activities stratified by management category will be randomly selected for monitoring to determine whether or not best management practices were implemented as prescribed. The selection of management actions to be monitored will be based on beneficial uses likely to be impacted, and for which best management practices are being prescribed.

**Monitoring Performed:** In FY 2012, KFRA staff conducted pre-treatment soil monitoring utilizing the Forest Soil Disturbance Monitoring Protocol. Soil attributes evaluated included forest floor conditions, surface soil disturbances, and subsurface conditions.

**Findings:** Onsite investigations determined soil characteristics and impacts of past management activities. Disturbance classes based on the previously mentioned soil attributes were used to quantify management impacts on soils. Results showed that average detrimental soil conditions ranged from 5 to 23 percent within designated project areas.

**Conclusion:** Resource Management Plan (RMP) objectives for limiting soil disturbance have been met.

**Comment/Discussion:** Quantifying soil disturbance enables resource area staff to determine whether RMP objectives for protecting soil resources are being met. Soil monitoring on the KFRA is a long-term program.

Pre-treatment soil disturbance monitoring was conducted in 2012 for the Replacement Gal and Wildgal timber sales, and within the Keno EA project area. Initial monitoring results of Wildgal showed an average 5 percent detrimental disturbance throughout the sale units. In Replacement Gal, monitoring indicated that ground disturbance from previous management activities was slightly above RMP objectives; however the extent of detrimental conditions was at levels well below RMP standards. Weather conditions precluded post-treatment monitoring. Additional transects will be established in 2013 on Replacement Gal to determine effectiveness and adaptive management in relation to Best Management Practices and Project Design Features.

Soil disturbance monitoring of the Keno EA project area suggested detrimental soil conditions in several proposed units exceeded the 20 percent limit specified in the RMP. Best Management Practices require sites where the standard is exceeded to receive mitigations such as ripping, backblading, or seeding. Post-project monitoring is recommended in treatment units exceeding RMP standards.

**Monitoring Question 2:** Are the prescribed actions, programs and interagency coordination efforts called for in the NFP Record of Decision Standards and Guidelines and resource management plan management direction being conducted?

**Monitoring Performed:** Review of timber sale and project files and monitoring of ground disturbing activities.

**Findings:** Management actions and programs are being conducted to meet or move towards desired future water and soils conditions. Riparian reserve treatments are being implemented to move towards Aquatic Conservation Strategy objectives. In coordination with Oregon Department of Environmental Quality (ODEQ), the resource area is supporting the development and implementation of Total Maximum Daily Load (TMDL) calculations and associated Water Quality Restoration Plans (WQRPs) for 303(d)-listed streams within the resource area. Data collection to support the sediment and temperature TMDLs has been completed in coordination with the USFS and ODEQ for the Lost River subbasin and the Upper Klamath River subbasins. In late FY 2003, the TMDL and associated USFS/BLM WQRP for the Upper Klamath Lake drainage was completed and is continuing to be implemented. A WQRP is in the process of being completed for the all BLM lands within the Upper Klamath and Lost River TMDL planning area and is scheduled for completion in June 2012. Soil productivity requirements are being maintained and improved in timber sales and other projects. Existing road mileage in the KFRA is being reduced. Riparian reserves are being managed to meet ACS objectives.

**Monitoring Question 3:** What watershed analyses have been or are being performed? Are watershed analyses being performed prior to management activities in key watersheds?

**Findings:** See Table M-8 describing the completed and ongoing watershed analyses.

### **Table M.8 - Status of Watershed Analysis**

<b><u>Watershed Analyses Completed</u></b>	<b><u>Key Watersheds Present</u></b>	<b><u>Completion Date</u></b>
Spencer Creek Watershed Analysis	Spencer Creek & Clover Creek	August 1995
Jenny Creek Watershed Analysis	Jenny Creek	February 1995
Topsy-Pokegama Landscape Analysis	None	July 1996
Gerber/Willow Valley Watershed Analysis	None	July 2003

**Conclusion:** Watershed analyses have been completed for 77% of the KFRA, including all key watersheds and essentially all BLM managed lands west of Highway 97. The Spencer Creek watershed analysis will eventually be updated with the new GIS Hydrology theme, the recently completed Spencer Creek Road Inventory, and new water temperature data. Portions of the

Topsy-Pokegama Landscape Analysis will be updated in the Affected Environment section of the Upper Klamath River Management Plan/EIS. The findings and recommendations of watershed analyses are incorporated in project design.

**Monitoring Question 4:**

What is the status of identification of in-stream flow needs for the maintenance of channel conditions, aquatic habitat, and riparian resources?

**Findings:** The BLM is cooperating with PacifiCorp and numerous other stakeholders regarding the Klamath Hydroelectric Project and implementation of the Klamath Hydroelectric Settlement Agreement (KHSA) .

**Monitoring Question 5:** What watershed restoration projects are being developed and implemented?

**Findings:** In addition to the projects described in the Aquatic Conservation Strategy section, other restoration projects are being developed as part of the Klamath River Management Plan/ EIS and other project level analyses. Project planning and implementation continues throughout the KFRA to enhance aspen stands; remove, realign, and improve roads; and construct fences to better manage livestock grazing near riparian areas.

**Conclusion:** Watershed restoration projects are being developed and implemented to meet the RMP and ACS objectives.

**Monitoring Question 6:** What fuel treatment and fire suppression strategies have been developed to meet Aquatic Conservation Strategy Objectives?

**Findings:** BMPs for the protection of soils, water, and riparian resources are being implemented during prescribed fire activities. Silvicultural prescriptions involving understory thinning treatments are being implemented in riparian reserves to reduce potential fuel loads to decrease the risk of catastrophic fires. These treatments are designed to improve forest health and meet the Aquatic Conservation Strategy objectives.

**Conclusions:** Fuel treatment prescriptions are being implemented to meet ACS and RMP objectives.

**Monitoring Question 7:** What is the status of development of road or transportation management plans to meet Aquatic Conservation Strategy Objectives?

**Findings:** A Transportation Management Plan (TMP) has been developed for lands covered by the NFP ROD. Inventories of existing road conditions and their potential to effect the attainment of ACS objectives have been completed in the Spencer Creek watershed, the Klamath River canyon, and the Gerber and Upper Lost River watersheds. This data will be used to supplement the existing TMP. A TMP is currently underway for the eastside of the resource area. Analysis of roads and road treatment options is done during timber sale planning.

**Conclusions:** A Transportation Management Plan has been developed and will be revised and supplemented with additional data from road inventories and project analyses.

**Monitoring Question 8:** What is the status of preparation of criteria and standards which govern the operation, maintenance, and design for the construction and reconstruction of roads?

**Findings:** A Transportation Management Plan has been developed for lands covered by the NFP ROD. Roads, culverts, and bridges are designed, constructed and maintained in accordance with policies and standards set forth in BLM 9100 Series Manual and the Best Management Practices (BMP). Maintenance levels are assigned to each road reflecting the

appropriate maintenance that fits the Transportation Management Objectives (TMO) for the planned management activity. In 2011, Hydrology and soils staff participated in the revision of Western Oregon Forest Road BMPs to bring them up to current state of the art standards and practices for protection of water quality and aquatic resources. These revised BMPs were incorporated into all project level planning efforts.

**Conclusions:** Progress is being made on development of the criteria and standards for roads.

**Monitoring Question 9:** What is the status of the reconstruction of roads and associated drainage features identified in watershed analysis as posing a substantial risk? What is the status of closure or elimination of roads to further Aquatic Conservation Strategy Objectives, and to reduce the overall road mileage within all watersheds? If funding is insufficient to implement road mileage reductions, are construction and authorizations through discretionary permits denied to prevent a net increase in road mileage in Key Watersheds?

**Findings:** For a complete summary of road treatments, refer to the Annual Program Summary, Section 24.0 - Transportation and Roads and Table 24.1.

**Conclusions:** Progress is being made in reducing overall road mileage and density and reducing the impacts of roads on water quality and aquatic/riparian habitat.

**Monitoring Question 10:** What is the status of reviews of ongoing research in key watersheds to insure that significant risk to the watershed does not exist?

**Monitoring Requirement:** Review of existing and proposed research activities in key watersheds and riparian reserves.

**Findings:** No formal research activities are being conducted in key watersheds or riparian reserves in the Klamath Falls Resource Area.

**Monitoring Question 11:** What is the status of evaluation of recreation, interpretive and user-enhancement activities/facilities to determine their effects on the watershed? What is the status of eliminating or relocating these activities/facilities when found to be in conflict with Aquatic Conservation Strategy objectives?

**Findings:** An evaluation of existing recreation facilities inside riparian reserves has not been completed to date.

**Monitoring Question 12:** What is the status of cooperation with other agencies in the development of watershed-based Coordinated Resource Management Plans and other cooperative agreements to meet Aquatic Conservation Strategy objectives? What is the status of cooperation with other agencies to identify and eliminate wild ungulate impacts which are inconsistent with attainment of Aquatic Conservation Strategy objectives?

**Findings:** A Coordinated Resource Management Plan was developed for the Spencer Creek Watershed in 1994 by a group consisting of several government agencies, private companies and individuals. Many individual and cooperative projects have been implemented to address concerns from the plan. The group continues to meet on an irregular basis to address resource management concerns on both public and private land. No detrimental impacts from wild ungulates have been identified.

**Conclusions:** Cooperative agreements and planning efforts are being developed to meet RMP and ACS objectives.

**Monitoring Question 13:** Are management practices achieving the goal of maintaining long-term site productivity by avoiding, minimizing, or ameliorating soil compaction, displacement, surface erosion, and loss of organic material, including coarse woody debris?

**Monitoring Requirement:** All management activities using best management practices will be monitored to determine whether best management practices are incorporated in the project design.

At least twenty percent of the timber sales, silviculture projects, or other ground disturbing activities stratified by management category will be randomly selected for monitoring to determine whether or not best management practices were implemented as prescribed. The selection of management actions to be monitored will be based on beneficial uses likely to be impacted, and for which best management practices are being prescribed.

Monitoring Performed Soil disturbance monitoring was conducted on the Wildgal and Replacement Gal Timber Sales, and the Keno EA project area. Additional soil monitoring will commence on future sales.

**Findings:** See Findings under Water and Soils, Implementation Question 1. Conclusions: See Conclusion under Water and Soils, Implementation Question 1. Comment/Discussion: The issue of soil health on the resource area is being investigated by both qualitatively and quantitatively assessing disturbance levels. Concerns have been raised on the KFRA about excessive soil compaction possibly occurring with repeated use of a mechanical harvester, mechanical slashbuster, or combination of both in a forest stand or juniper woodland over time. Use of a mechanical harvester/slashbuster results in greater areal ground disturbance since it is not confined to skid roads, although in theory a mechanical harvester reportedly causes less soil compaction since it exerts less pounds per square inch of force/pressure than other ground-based harvesting machinery. Since use of a mechanical harvester/slashbuster is becoming more and more common and is the most economical choice for density-management treatment of forest stands and juniper woodlands, the KFRA is measuring the areal extent of soil disturbance and changes in soil bulk density in representative ground-disturbing projects to evaluate soil health.

The RMP threshold for soil disturbance is detrimental soil compaction (defined as 15 percent increase in bulk density) over 20 percent of the project area. Results of monitoring data analysis to date have not been conclusive regarding soil compaction. Consequently, the KFRA will continue to monitor ground disturbing treatments and modify monitoring protocols to quantify the areal extent and degree of soil compaction resulting from various treatment methods.

The Forest Soil Disturbance Monitoring Protocol (FSDMP), a qualitative methodology for soil monitoring, was initiated in 2011. Information collected provided initial data regarding soil disturbance, post-treatment. Preliminary results indicate that ground disturbance from skid trails and landings was 20 to 23 percent, slightly above RMP objectives. However, the overall extent of detrimental conditions was 11 to 13 percent, well below RMP standards. Additional transects were established in other units, pre- and post-treatment to determine effectiveness and adaptive management in relation to Project Design Features and Best Management Practices.

In 2012, the FSDMP was utilized on several projects. Pre-treatment monitoring results of the Wildgal timber sale showed an average 5 percent detrimental disturbance throughout the sale units. In the Replacement Gal sale, monitoring indicated that ground disturbance from previous management activities was slightly above RMP objectives; however the extent of detrimental conditions was at levels well below RMP standards. Additional transects will be established in 2013 on Replacement Gal to determine effectiveness and adaptive management in relation to Best Management Practices and Project Design Features.

Soil disturbance monitoring of the Keno EA project area suggested detrimental soil conditions in several proposed units exceeded the 20 percent limit specified in the RMP. Best Management Practices require sites where the standard is exceeded to receive mitigations such as ripping, backblading, or seeding. Post-project monitoring is recommended in treatment units that exceed RMP standards.

## M.5 Terrestrial Species Habitat

### Expected Future Conditions and Outputs

- Maintenance of biological diversity and ecosystem health to contribute to healthy wildlife populations, consistent with BLM's Fish and Wildlife 2000 plan and other nationwide initiatives.
- Maintenance of desired conditions in each special habitat (such as meadows, wetlands, and cliff/talus slopes), plus desired conditions in buffers at least 100 feet wide around dry meadows, and wooded swamps

### Implementation Monitoring

**Monitoring Question 1:** Are suitable (diameter, length and numbers of) snags, coarse woody debris and green trees being left, in a manner that meets the needs of species and provides for ecological function in harvested areas as called for in the SEIS Record of Decision Standards and Guidelines and RMP management direction?

**Monitoring Requirement:** At least 20 percent of regeneration harvest timber sales in each resource area will be examined by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters, and distribution within harvest units. The measure of distribution of snags and green trees will be the percent in the upper, middle and lower thirds of the sale units monitored. Snags and green trees remaining 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 be inventoried pre- and post-harvest to determine if SEIS Record of Decision and RMP down log retention direction has been followed.

**Monitoring Performed:** Thermal clumps were identified and established to meet wildlife objectives in timber sale areas. Project design features for retention of coarse woody debris and snag retention were implemented in timber sale and fuel treatment units.

**Findings:** The post-harvest monitoring shows green tree retention, snags, and coarse woody debris requirements were met. See Matrix discussion in Section M.2.

**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.

**Monitoring Performed:** On the LOST EA areas, surveys for special status species such as northern spotted owls, great gray owls, northern goshawk, and terrestrial mollusks were conducted prior to ground-disturbing activities. No sites needing protection were identified. A seasonal restriction was placed in the Decision Record to ensure that a near by bald eagle site will remain undisturbed during the critical nesting period when the project is implemented.

**Findings:** Special habitats are identified and protected through project design that avoids these habitats or by creating reserves within the project areas. Buffers and seasonal restrictions are also included in the project design features. Wildlife biologists often participate in the actual layout to ensure that special habitats get proper recognition and protection. Biologists also participate in the fuels program to identify objectives of the treatment that are compatible with special habitats.

**Monitoring Question 3:** What is the status of designing and implementing wildlife restoration projects?

**Monitoring Performed:** Several projects were completed to improve wildlife habitat in FY 2012. One hundred fifty (150) acres of juniper were hand-felled on deer winter range in the Dairy area. More than 200 acres of brushfield rejuvenation mechanical treatments were identified and incorporated into the Hayden Fox EA Proposed Action for analysis. Sagebrush seed was collected and processed for future habitat improvement/restoration projects. Approximately 2,000 acres of mechanical juniper removal was accomplished in the Bly Mountain area in order to improve habitat conditions as part of a multi-year project in that area. Plans were developed and supplies purchased for construction of wildlife exclusion screens to be placed on vent stacks on approximately 20 outhouses at BLM recreation sites.

**Findings:** Several projects have been designed and implemented to improve habitat for wildlife. Fuels reduction projects were designed around eagle nest sites and range improvement projects were implemented to benefit sage grouse, landbirds, and mule deer.

**Monitoring Question 4:** What is the status of designing and constructing wildlife interpretive and other user-enhancement facilities?

**Monitoring Performed:** No design or construction of wildlife interpretive facilities occurred in FY 2012.

**Findings:** No design or construction of wildlife interpretive facilities occurred in FY 2012

**Monitoring Question 5:** Are elk herds on BLM-administered lands stable or increasing?  
**Monitoring Performed:** Annual guzzler/cistern maintenance and repair was conducted by the BLM, Oregon Department of Fish and Wildlife (ODFW) and Oregon Hunter Association (OHA). In addition, native grasses were seeded in elk winter range areas. Seasonal and permanent road closures continued across to the Resource Area in elk habitat.

**Findings:** According to ODFW the elk herds within KFRA BLM administered lands are stable. Anecdotally, we have seen increased elk activity in the southern end of the Gerber block since juniper removal and pine stand underburns were conducted in that area several years ago.

**Findings:** The Oregon Department of Fish and Wildlife (ODFW) monitor elk populations for the state. According to ODFW informal herd counts, elk are stable to increasing in number in the Klamath Falls Resource Area.

**Monitoring Question 6:** Are range conditions stable or is there obvious competition between resources?

**Monitoring Performed:** See Section M.19 Rangeland Resources/Grazing Management for studies and monitoring that address the range condition stability.

**Findings:** In general, all studies have found range conditions to be stable to improving on the vast majority of the BLM administered lands in the KFRA.

Summarized findings to date are that livestock (cattle) and wild horses (westside only) make little use of any of the shrub species, with a couple exceptions. Cattle and, in particular, wild horses, will make occasional significant use (i.e., moderate or higher) on serviceberry on the westside; neither make significant summer use of the wedgeleaf ceanothus. On the eastside of the KFRA, cattle will make similar occasional significant use (moderate to heavy) on bitterbrush, but only in the few areas that receive significant livestock use after approximately August 15th.

**Conclusions:** Rangeland conditions are apparently stable or improving on most of the BLM administered lands within the KFRA.

There are no particular resource concerns with shrub use within the KFRA. The westside use on the serviceberry is insignificant because that shrub is an insignificant part of the vegetation communities. Wedgeleaf ceanothus is vastly more abundant and is not being impacted at present by summer livestock (or wildlife) use. On the eastside, the areas that have received moderate or higher bitterbrush use are extremely small and in areas that are rarely, if ever, used by wintering deer or elk. No studies have found any significant resource competition issues between large wildlife herbivores and livestock on the BLM lands.

**Monitoring Question 7:** Are facilities or improvements functional and providing desired management results?

**Monitoring Requirement:** Maintain and check management facilities (such as guzzlers, springs, road closures, etc.) periodically to ensure that they are functioning properly.

**Monitoring Performed:** There are currently 10 cisterns and 24 spring developments in the resource area are being maintained for wildlife. The cisterns are located throughout the resource area in areas where water is not plentiful. In the past, maintenance of these water sources was through a challenge cost share with the Oregon Department of Fish and Wildlife. In 2012, these springs and guzzlers were checked by volunteers, OHA, ODFW and BLM biologists. In 2012, the BLM wildlife biologists used trail cameras to gain a better understanding of how water developments on KFRA were (or were not) being used by various species of wildlife. Results are mixed, with some sources being used quite heavily by numerous species and other sources being used very minimally. Work continues to try to determine the cause of low use at some sources. Additional areas that could support water developments are periodically reviewed.

On the existing mule deer winter range closures, seasonal road closures are visited at least monthly during the closure period if conditions allow. Gates with history of being vandalized or driven around are monitored with trail cameras. Identification information of violators captured on cameras is provided to Oregon State Police for enforcement action.

**Findings:** The installation of heavy duty pipe gates in place of cables or powder river gates appears to have greatly reduced - but not eliminated - the incidence of vandalism of gates and violation of the closures. The ability to monitor gates for violations is limited by the number of trail cameras available to the KFRA, currently two. Depending on the gate, it may take two cameras to capture sufficient information to make an identification. This limits the number of gates that can be monitored.

**Conclusions:** Purchase of two more trail cameras would greatly increase the chances of identifying violators, violators being cited, and potential violators would be discouraged from driving around the closures.

**Monitoring Question 8:** Is the BLM protecting special habitats as provided for in the RMP?

**Monitoring Requirement:** Examine 20 percent of BLM actions on lands containing or near special habitats to determine whether special habitats were protected as provided for in the RMP. Monitor the effects of BLM management on wildlife species using a variety of methods. Coordinate surveys of game species with the Oregon Department of Fish and Wildlife. Conduct monitoring of other species and habitats as needed, such as neotropical migratory landbirds by vegetation community, individual species surveys when needed, and vegetation surveys as part of the timber and range management activities.

**Monitoring Performed:** Riparian zones are marked and managed according to the Aquatic Conservation Strategy. Raptor nest sites are protected with buffers and nest season restrictions. Special habitats (such as talus slopes, seeps and springs, etc.) are identified during the planning phase of the activities and protected during the design and implementation phase using the Best Management Practices identified in the RMP. Other habitats such as meadows important to great gray owls, big game species, and other wildlife are identified during surveys, and buffers are established during timber sale preparation.

**Findings:** Special habitats not already identified are being identified during project development and design, Nest trees, habitat buffers and reserves are marked in the field and recorded in GIS. District Designated Reserves (DDRs) and District Designated Reserve Buffers (DDRBs) have been established around all spotted owl nest cores, per RMP guidance. Known survey and manage mollusk and fungi sites are buffered and protected according to the management recommendations for the species.

**Conclusions:** Special habitats specified in the RMP are being provided for as they are identified.

**Monitoring Question 9:** Is the average width of undisturbed buffers retained following timber harvest and site preparation activities as specified in the RMP?

**Monitoring Requirement:** Determine average buffer widths by measurements at approximately equidistant points around the affected unique habitat within each timber sale unit.

**Monitoring Performed:** Buffers are checked during the post timber sale reviews on 20 percent of the sales. Nest buffers for owls, eagles, and accipiters are visited annually during nesting and reproductive success monitoring efforts.

**Findings:** Buffers are marked and managed according to NFP and RMP guidelines. The average width of buffers established according to the NFP and RMP are being retained following timber harvests

## **M.6 Special Status and SEIS Special Attention Species Habitat**

### **Expected Future Conditions and Outputs**

- Protection, management, and conservation of federal 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 assessment species and SEIS special attention species so as not to elevate their status to any higher level of concern.

## Implementation Monitoring

### **Monitoring Question 1:**

A) Are special status species being addressed in deciding whether or not to go forward with forest management and other actions?

B) During forest management and other actions that may disturb special status species, are steps taken to mitigate or avoid disturbances?

**Monitoring Requirement:** At least 20 percent of the files on each year's timber sales, range improvements, grazing decisions, and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding special status species and related recommendations and decisions in light of the Endangered Species Act requirements, policy and SEIS Record of Decision Standards and Guidelines, and 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:** Review of the following projects for Special Status Species: Keno and Hayden Fox EAs. Survey for potential habitat and monitoring of known territories/ sites continues on the resource area for special status species.

**Findings:** All areas where forest management or other ground disturbing actions are to take place are surveyed to protocol before the project implementation. If any listed species are found they are managed according to the Management Recommendation in the NFP and resource area guidelines.

### **Animals**

#### *Northern Spotted Owl*

Northern spotted owls were surveyed and monitored to protocol for Keno and Hayden Fox projects. Surveys have been conducted at known sites and in potential habitat. Seasonal restrictions have been or will be placed in all appropriate areas to avoid disturbance during the critical nesting period. Consultation with the U.S. Fish and Wildlife Service was completed for the LOST EA. No seasonal restrictions are necessary for LOST or Hayden Fox projects.

#### *Great Gray Owl*

Great gray owl surveys were completed to protocol in the Keno and most of the Hayden Fox project areas. Surveys for the remaining Hayden Fox units are planned for completion in spring/summer of 2013, prior to finalization of the EA. Surveys have been conducted in potential habitat. No new sites were documented during these survey to date.

#### *Bald Eagles*

A Bald eagle nest site is known to occur in in the LOST Project Area. A seasonal restriction was placed in the Decision Record in order to prevent disturbance during the critical nesting period. Projects are designed to maintain nesting and roosting habitat.

#### *Mollusks*

Terrestrial: Survey and Manage terrestrial mollusk surveys were completed in 2012 for the Keno EA and most of the Hayden Fox project area in 2012. Surveys for the remaining Hayden Fox units are planned for completion in spring/summer of 2013, prior to finalization of the EA. No new sites were identified in these project areas to date.

**Plants**

*Vascular Plants and Fungi*

Surveys for special status vascular plants were conducted for approximately 10,000 acres of Klamath Falls Resource Area in 2012. Special status Fungi surveys were conducted for approximately 1,033 acres in 2012.

**Conclusions:** Special status species are being addressed in deciding whether or not to go forward with forest management and other actions, and steps are taken to mitigate or avoid disturbances.

**Monitoring Question 2:** Are the actions identified in plans to recover species being implemented in a timely manner?

**Monitoring Requirement:** Review implementation schedule and actions taken annually, to ascertain if the actions to recover species were carried out as planned.

**Monitoring Performed:** Programs were reviewed for compliance with recovery plans.

**Findings:**

**Animals**

Since the bald eagle has recovered, there is only one recovery plan being implemented for terrestrial wildlife species. Recommendations within the Northern Spotted Owl Recovery Plan are being implemented in a timely manner.

**Plants**

No Federally-listed threatened or endangered plant species occur on BLM land administered by the Klamath Falls Resource Area. Therefore, no recovery plans have been developed for plant species in the KFRA.

**Conclusions:** Actions identified in plans to recover species are being implemented in a timely manner.

**Monitoring Question 3:** What coordination with other agencies has occurred in the management of special status species?

**Monitoring Requirement:**

The Annual Program Summary will address Implementation Question 3.

**Monitoring Performed:** Coordination and consultation continued with the USFWS on timber sales, forest health and fuel treatment projects, and any projects with potential impact to threatened and endangered species.

The KFRA has coordinated with adjacent landowners on management of northern spotted owls, bald eagles, and great gray owls. These practices include surveying for spotted owls, agreeing on core areas, coordinating timber management and silvicultural practices, and monitoring of nesting activity before, during, and after projects. The KFRA continued to communicate with USFWS, ODFW, the Klamath Tribes, Oregon Division of State Lands, Bureau of Reclamation, and several private organizations about the Wood River Wetland restoration effort.

**Findings:** Coordination and cooperation with multiple agencies is a continuous process in project planning and implementation on the Klamath Falls Resource Area.

**Conclusions:** Coordination with other agencies has occurred in the management of special status species.

**Monitoring Question 4:** What land acquisitions occurred or are underway, to facilitate the management and recovery of special status species?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 4.

**Monitoring Performed:** Reviewed potential land acquisitions.

**Findings and Conclusions:** No land acquisitions occurred or are underway, to specifically facilitate the management and recovery of special status species.

**Monitoring Question 5:** What site-specific plans for the recovery of special status species were or are being developed?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 5.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

The KFRA is not currently involved in the development of any site-specific recovery plan.

**Plants**

The KFRA is not currently involved in the development of any site-specific management plan.

**Conclusions:** Analyses that ascertain species requirements or enhances the recovery or survival of a species are ongoing.

**Monitoring Question 6:** What is the status of analysis, which ascertains species requirements or enhances the recovery or survival of a species?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 6.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

The KFRA continues to monitor known sites for northern spotted owls, northern goshawks, and eagles. In addition, we also survey potential habitat for spotted owls and northern goshawks before we conduct ground-disturbing activity. Spotted owl habitat analysis that considers survival and recovery is ascertained for individual owls during project development through the EA process and subsequent Section 7 Consultation with the USFWS.

**Plants**

The KFRA is not currently involved in the development of any site-specific management plan.

**Conclusions:** Analyses that ascertain species requirements or enhances the recovery or survival of a species are ongoing.

**Monitoring Question 7:** What is the status of efforts to maintain or restore the community structure, species composition and ecological processes of special status plant and animal

habitat?

**Monitoring Requirement:** The Annual Program Summary will address Implementation Question 7.

**Monitoring Performed:** Program review.

**Findings:**

**Animals**

The forestry and rangeland programs continue to look at long term health of the ecosystem. Silvicultural prescriptions and fuels treatments are designed to maintain or restore the community structure, species composition and ecological processes

**Plants**

No efforts have been made specifically to maintain or restore the community structure, species composition and ecological processes of special status plant species habitat. However, the reintroduction of fire as an ecosystem process through the prescribed fire program may indirectly accomplish this objective since special status plant species are similarly adapted to fire as other plant species in the plant community of which they are a component.

**Conclusions:**

Long-term ecosystem health is addressed in management of the timbered land and rangelands.

## M.7 Aquatic Species Habitat

### Expected Future Conditions and Outputs

(See also Aquatic Conservation Strategy Objectives)

- Maintenance or enhancement of the fisheries potential of streams and other waters consistent with 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:** Are at-risk fish species and stocks being identified?

**Monitoring Requirements:** The Annual Program Summary will report on the status of watershed analysis of habitat within individual watersheds and restoration project needs.

**Findings:** The KFRA continued to plan and develop restoration projects on BLM administered lands as identified within the relevant watershed analyses. Presence/absence and distribution of at-risk fish species/stock continued to be developed in support of restoration actions. See Aquatic Species Habitat section of Annual Program Summary.

**Monitoring Question 2:** Are fish habitat restoration and enhancement activities being designed and implemented, which contribute to attainment of Aquatic Conservation Strategy Objectives?

**Monitoring Requirements:** The Annual Program Summary will report on the status of the design and implementation of fish habitat restoration and habitat activities.

**Monitoring Performed:** Large wood enhancement to for the purpose of increasing channel complexity and habitat diversity. (See the Water and Soils section - Monitoring Question 5.)

**Findings:** Fish habitat restoration and enhancement activities are being designed and implemented to contribute towards attainment of ACS objectives related to at-risk fish stocks. See Aquatic Species Habitat and ACS section of Annual Program Summary.

**Monitoring Question 3:** Are potential adverse impacts to fish habitat and fish stocks being identified?

**Monitoring Requirements:** The Annual Program Summary will report on the status of cooperation with federal, tribal and state fish management agencies to identify and eliminate impacts associated with poaching, harvest, habitat manipulation and fish stocking which threaten the continued existence and distribution of native fish stocks inhabiting federal lands. The APS will identify any management activities or fish interpretive and other user-enhancement facilities that have been detrimental effects on native fish stocks.

**Monitoring Performed:** There has been considerable cooperation between state, federal, and tribal biologists on the work being conducted and work being proposed at the Wood River project (see Wood River section of Annual Program Summary). The project will have long term benefits to fish habitat but there have been short-term losses in habitat quality such as increased sediment which have been identified. These impacts have been mitigated in a number of ways (see Wood River section of Annual Program Summary).

There has also been considerable cooperation between state, federal, and tribal biologists on the Klamath Hydro-electric relicensing project (#2082) to identify existing and potential adverse impacts to fish habitat and fish stocks.

The KFRA staff have been cooperating with U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, U.S. Forest Service, The Nature Conservancy, U.S. Bureau of Reclamation, and U.S. Geological Survey-Biological Resources Division on redband trout, sucker, and bull trout working groups to develop and implement scientifically based management strategies for these species.

The resource area staff continues to coordinate with the range, timber, and fuels management programs in order to protect and improve the aquatic habitats. Through the interdisciplinary process actions that are identified as potentially affecting fishery and aquatic resources are identified and recommendations are made to avoid adverse impacts.

**Findings:** Adverse impacts to fish habitat and fish stocks are being identified and mitigation performed.

**Monitoring Question 4:** Are habitat improvement projects and opportunities being identified?

**Monitoring Requirements:** At least twenty percent of the files on each year's timber sales, and other relevant actions, will be reviewed annually to evaluate documentation regarding fish species and habitat and related recommendations and decisions in light of policy and NFP ROD Standards and Guidelines and 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:** A review of project proposals, including watershed analysis, is performed throughout the year. Habitat improvement projects are typically designed as part of the proposed action or alternatives to the proposed action.

Significant time has been spent in Gerber, Spencer Creek, and Klamath River areas reviewing existing road/stream crossings for extension of channel connections from road networks and sedimentation problems in most of the fish bearing reaches on BLM administered lands.

**Findings:** Habitat improvement projects and opportunities are being identified and designed into the overall management of the resource area.

**Monitoring Question 5:** Are fish populations adequate to provide present and expected future recreational needs?

**Monitoring Requirements:** Monitor lakes and fish populations, and stocks if necessary.

**Monitoring Performed:** The KFRA has several excellent recreational fisheries: the lower Wood River, the Klamath River, Fourmile Creek, Spencer Creek, reservoirs of the Gerber/Willow Valley Watershed, and Topsy reservoir. Most stream fisheries are for redband trout and some brown trout, but Wood River and Fourmile Creek contain brook trout as well. Reservoir fisheries are for multiple cold water and warm water game fish species. The BLM has contributed to ODFW radio-telemetry monitoring of the Wood River redband trout populations to assess fish movement and aquatic habitats.

**Findings:** Recreational needs for fisheries are growing in Klamath County. The resource area staff will need to assess and consult with ODFW and USFWS on these streams and watersheds in light of the increasing recreational demand. The potential exists for improving habitat to protect recreational fisheries against adverse impacts in order to continue to meet recreational needs.

## M.8 Noxious Weeds

### Expected Future Conditions and Outputs

- Containment and/or reduction of noxious weed infestations on BLM-administered land using an integrated pest management approach.
- Avoidance of the introduction or spread of noxious weed infestations in all areas.

### Implementation Monitoring

**Monitoring Question 1:** Are noxious weed control methods compatible with Aquatic Conservation Strategy Objectives?

**Monitoring Requirements:** Review the files of at least twenty percent of each year's noxious weed control applications to determine if noxious weed control methods were compatible with Aquatic Conservation Strategy Objectives.

**Findings:** Noxious weed control applications in FY 2012 were conducted using an integrated pest management approach that included manual, mechanical, and chemical control methods. These methods are used in accordance with the Klamath Falls Resource Area Integrated Weed Control Plan (IWCP) and Environmental Assessment (EA)(OR-014-93-09), which is tiered to the Northwest Area Noxious Weed Control Program EIS (December 1985) and Supplement (March 1987), and are compatible with Aquatic Conservation Strategy Objectives.

## M.9 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, Research Natural Areas, and Environmental Education Areas.
- Preservation, protection, or restoration of native species composition and ecological processes of biological communities in research natural areas.
- 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 resource management plan objectives and management direction for special areas?

**Monitoring Requirement:** Annually, the files on all actions and research proposals within and adjacent to special areas will be reviewed to determine whether the possibility of impacts on areas of critical environmental concern values was considered, and whether any mitigation identified as important for maintenance of areas of critical environmental concern 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:** Review of program and actions for consistency with RMP objectives and direction.

**Findings:** The Wood River Wetland Area of Critical Environmental Concern (ACEC) has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints.

Treatment of noxious weed populations is conducted annually within the Klamath Canyon ACEC. An integrated management approach is used which includes chemical, mechanical and biological methods. Control of noxious weeds would help maintain and restore the biological, recreational and scenic resources for which the area was designated.

**Conclusions:** BLM actions and BLM authorized actions/uses near or within special areas are consistent with resource management plan objectives and management direction for special areas.

**Monitoring Question 2:**

What is the status of the preparation, revision, and implementation of areas of critical environmental concern management plans?

**Findings:** The Wood River Wetland ACEC has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. Many of the restoration and interpretation actions have been completed, including river restoration, interpretive displays, and scenic view areas.

Management of the Upper Klamath River Canyon ACEC was addressed in the Draft Upper Klamath River Management Plan and Environmental Impact Statement, released for public comment in April 2003. The final River Plan/EIS will be completed at some future date.

All ACECs are managed to protect the relevant and important values, which were identified when they were evaluated and designated during the RMP process. General management direction for each special area is given in the Klamath Falls Resource Area Record of Decision and Resource Management Plan and Range Program Summary (pp. 41 - 42).

**Conclusions:** Management plans for some ACECs are being or have been developed and implemented.

**Monitoring Question 3:** What environmental education and research initiatives and programs are occurring in the research natural areas and environmental education areas?

**Findings:** See the Annual Program Summary, Section 30: Education and Outreach, and Section 31: Research.

**Conclusions:** Environmental education and research initiatives and programs are occurring in the research natural areas and environmental education areas.

**Monitoring Question 4:** Are existing BLM actions and BLM authorized actions and uses not consistent with management direction for special areas being eliminated or relocated?

**Findings:** BLM actions and BLM authorized actions/uses near or within special areas are consistent with resource management plan objectives and management direction for special areas.

**Monitoring Question 5:**

A) Are actions being identified which are needed to maintain or restore the important values of the special areas?

B) Are the actions being implemented?

**Findings:** The Wood River Wetland ACEC has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints. Many of the restoration and interpretation actions have been completed, including river restoration, interpretive displays, and scenic view areas. New interpretive panels were updated and installed at the BLM entrance in FY2012. A hydrology and water quality adaptive management monitoring report was completed titled "BLM Wood River Wetland Studies, 2012 summary results Report."

**Conclusions:** Actions are being identified which are needed to maintain or restore the important values of the special areas, and the actions are being implemented

## M.10 Wild and Scenic Rivers

### Expected Future Conditions and Outputs

- Protection of the Outstandingly Remarkable Values (ORVs) of designated components of the national Wild and Scenic Rivers System through the maintenance and enhancement of the natural integrity of river-related values.
- Protection of the Outstandingly Remarkable Values of eligible/suitable Wild and Scenic Rivers and the maintenance or enhancement of the highest tentative classification pending resolution of suitability and/or designation.
- Designation of important and manageable river segments suitable for designation where such designation contributes to the National Wild and Scenic Rivers System.

## Implementation Monitoring

**Monitoring Question 1:** Are BLM actions and BLM authorized actions consistent with protection of the Outstandingly Remarkable Values of designated or suitable rivers?

**Monitoring Requirements:** Annually, the 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 mitigation was actually implemented.

**Monitoring Performed:** BLM recreation staff members correspond periodically with outfitters and guides who provide commercial rafting tours on the upper Klamath River, personnel working for PacifiCorp, the utility company that operates the hydroelectric plants above and below the designated Wild & Scenic segment, and personnel from other agencies that perform work in the canyon. Topics such as outfitter/guide permit regulations and compliance, road conditions, water flows, visitor safety, BLM projects being implemented, and wildfire safety are typically discussed.

In FY 2012, BLM personnel coordinated with PacifiCorp to design and implement a high water/flood warning system in the Klamath River Campground

**Findings:** Whitewater rafting is consistent with maintaining the Outstandingly Remarkable recreation Value on the upper Klamath Wild and Scenic River.

**Monitoring Question 2:**

- A) Are existing plans being revised to conform to Aquatic Conservation Strategy Objectives?
- B) Are revised plans being implemented?

**Findings:** A draft Upper Klamath River Management Plan/EIS, released for public comment in April 2003, was developed for the 15-mile portion of the Klamath River that is within the KFRA to conform with Aquatic Conservation Strategy Objectives. The final UKRMP/EIS is on hold.

**Monitoring Question 3:** Do actions and plans address maintenance or enhancement of the outstandingly remarkable values?

**Monitoring Requirements:** Annually, the 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 mitigation was actually implemented.

**Monitoring Performed:**

In 2012, BLM coordinated with PacifiCorp on a multi-year Gravel Augmentation Plan set forth under the Klamath Hydroelectric Settlement Agreement  
A vault toilet was removed and replaced in the Klamath River Campground.. The work was designed and implemented to avoid impacts to the WSR ORVs.

**Findings:** Objectives for maintaining and enhancing ORV's were met in all project implementation.

## M.11 Cultural Resources Including American Indian Values

### Expected Future Conditions and Outputs

- Identification of cultural resource localities for public, scientific, and cultural heritage purposes.
- Consideration 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:**

Are cultural resources being addressed in deciding whether or not to go forward with forest management and other actions? 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 files on each year's timber sales and other relevant actions (e.g., rights-of-way, instream structures) will be reviewed annually to evaluate documentation regarding cultural resources and American Indian values in light of requirement, policy and NFP Record of Decision Standards and Guidelines, and 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:** Review of existing survey data for Fuels and Timber management projects and in-field inspection of contract activity.

**Findings:** A review of existing data (Class I inventory) was conducted prior to implementation of all ground disturbing projects, resulting in fifty-one Class I reviews, all but eight projects occurred in areas of previously surveyed areas (Class III Inventory). In previously surveyed areas, an archaeologist performed monitoring at site locations within the project area. Monitoring consisted of relocating sites, reestablishing flagging to outline site boundaries for avoidance, and updating site location and site report forms. Once sites were relocated with a Global Positioning System, site location/ boundaries were downloaded into a geographical information system (GIS) database. Because the sites would be avoided during project activity, a "no effect" determination was made under the BLM- State Historic Preservation Office under our existing protocol. A total of 115 sites were monitored.

**Conclusion:** Cultural resources were addressed in deciding whether or not to go forward with ground disturbing activities.

**Monitoring Question 2:** What mechanisms have been developed to describe past landscapes and the role of humans in shaping those landscapes?

**Findings:** An ethnographic overview contract has begun which will include summarizing all previous ethnographic studies and performing additional studies with elders of The Klamath Tribes. Off-site mitigation for a project has allowed for a study on rock features and what these mean to tribal peoples, as well as how to identify them. KFRA has also installed an artifact outreach case in the office lobby for visitors learn about the tribal use for the area and historic contact/settlement

**Conclusion:** Site data is being updated and sites are being assessed for the inclusion to the National Register of Historic Places.

**Monitoring Question 3:** What efforts are being made to work with American Indian groups to accomplish cultural resource objectives and achieve goals outlined in existing memoranda of understanding and develop additional memoranda as needs arise?

**Findings:** The BLM consults with the Klamath Tribes on projects that could potentially impact cultural resources and Tribal values through a bimonthly meeting with the Klamath Tribes Culture and Heritage Department, as well as additional phone calls and emails as needed.

Additionally, the KFRA Archaeologist is part of the on-going tribal consultation efforts for the Department of Interior's Klamath Secretarial Decision.

**Monitoring Question 4:** What public education and interpretive programs were developed to promote appreciation of cultural resources?

**Findings:** KFRA archaeologists regularly participate in public education programs. During FY 2012, archaeological presentations were given to a range of groups. The KFRA lead archaeologist participated as the only OR/WA employee in BLM's national symposium on homesteading at Society for American Archaeology's annual conference in April 2012 in Memphis, TN; her paper was a result of Brown's research and interviews with descendants of the Gerber Family, an early homesteading family within the resource area. The same paper was also given in May 2012 at a regional archaeological conference, the State of Jefferson; which she organized. The KFRA archaeologist's paper was adapted and published in OR/WA BLMs popular magazine publication, "Northwest Passage," as well as turned into a BLM video and posted on www.youtube.com

## M.12 Visual Resources

### Expected Future Conditions and Outputs

- Preservation or retention of the existing character of landscapes on BLM-administered lands allocated for Visual Resource Management Class I and II management; partial retention of the existing character on lands allocated for Visual Resource Management Class III management and major modification of the existing character of some lands allocated for Visual Resource Management Class IV management.
- Continuation of emphasis on management of scenic resources in selected high-use areas to retain or preserve scenic quality.

### Implementation Monitoring

**Monitoring Question 1:** Are visual resource design features and mitigation methods being followed during timber sales and other substantial actions in Visual Resource Management Class II, III, and IV areas?

**Monitoring Requirements:** Twenty percent of the files for timber sales and other substantial projects in Visual Resource Management Class II and III areas will be reviewed to ascertain whether relevant design features or mitigating measures were included.

**Monitoring Performed:** All fiscal year 2012 timber sales and other substantial projects.

**Findings:** Several project actions for various resources, including fuels treatments and timber sales, were reviewed and additional mitigation or project design features to protect visual resources were incorporated as needed.

**Conclusion:** Visual resource design features and mitigation methods are being followed during forest health treatments planning and other substantial actions in Visual Resource Management Class II, III, and IV areas to minimize and mitigate any adverse impacts from those projects on visual resources.

## M.13 Wildland Urban Interface Areas

### Expected Future Conditions and Outputs

- Consideration of the interests of adjacent landowners, including residents, during analysis, planning, and monitoring related to managed rural interface areas. These areas are defined as public lands within 1/4 mile of identified urban interface areas zoned for one to twenty acre lots. (These interests include personal health and safety, improvements to property and quality of life.)

### 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:** In FY 2012, monitoring was completed on projects implemented in urban interface areas.

**Findings:** The monitoring of interface projects found no instances where the project design features or mitigation measures were not followed.

**Conclusion:** Implementation of interface projects is consistent with project design features and objectives to minimize impacts were met.

## M.14 Socioeconomic Conditions

### Expected Future Conditions and Outputs

- Contributions to local, state, national, and international economies through sustainable use of BLM-managed lands and resources and use of innovative contracting and other implementation strategies.
- Provision of amenities for the enhancement of communities as places to live and work.

### 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?

**Findings:** The KFRA has coordinated with state and local governments in diverse activities such as recreation and timber sale planning, fish habitat inventory, water quality monitoring, hazardous material cleanup, air quality maintenance, wildfire suppression, road improvement, and recreation site developments. In 2010, the KFRA accepted bids on a new stewardship contract. One of the objectives of the contract was to supply more jobs within the local area. Two contractors were awarded the contract, initially funded largely by ARRA funds, and are currently working on a number of projects within the Klamath county area.

**Monitoring Question 2:** Are RMP implementation strategies being identified that support local economies?

**Findings:** In 2011, the majority of the support for local economies came from timber sales, stewardship contract work, and fuel reduction/vegetation manipulation contracts that employed local people. Since 2004, the Resource Area has tasked out over \$2,000,000 of service work under the Gerber Stew Stewardship Contract. In addition to the service work, which generated local employment, a variety of forest and rangeland products are removed and delivered both locally and to the surrounding region. Products include sawlogs, clean chips for hardboard production locally, and biomass for energy production. Recreation facilities in such areas including the Upper Klamath River and several campgrounds (Gerber and Topsy) received infrastructure enhancements to improve visitor experiences and meet user expectations. Additional enhancements such as construction of new trails, designated back county byways, interpretive displays, and brochures are also developed as funding allows.

**Monitoring Question 3:** What is the status of planning and developing amenities that enhance local communities, such as recreation and wildlife viewing facilities?

**Findings:** Reference Monitoring Question Findings in # 1 and 2 above, and in the sections addressing Recreation, Wildlife and the Wood River Wetland area accomplishments in this document

## M.15 Recreation

### Expected Future Conditions and Outputs

- Provision of a wide range of developed and dispersed recreation opportunities that contribute to meeting projected recreation demand within the planning area.
- Provision of non-motorized recreational opportunities and creation of additional opportunities consistent with other management objectives.

### Implementation Monitoring

**Monitoring Question 1:** What is the status of the development and implementation of recreation plans?

**Findings:** The BLM completed the draft Upper Klamath River Management Plan/ Environmental Impact Statement (KRMP/EIS) in April 2003. The final KRMP/EIS is on hold. Recreation management (including proposed alternatives for non-motorized recreation opportunities) is a component of this river plan. A memorandum of understanding has been signed with the Oregon State Parks and Recreation Department on joint management of the Wild and Scenic River/State Scenic Waterway. A separate chapter of the river plan will address State Scenic Waterway issues.

Analysis of issues and projects has been completed for the Hamaker Mountain Special Recreation Management Area (SRMA), and has been started for the Stukel Mountain SRMA. No timeline for completing more comprehensive recreation plans for these areas is proposed.

Site-specific design and planning along with ongoing facility upgrades and renovations continue to be implemented through Recreation Pipeline Restoration Funds under the existing Klamath Falls RMP and Wood River Wetland RMP.

The Gerber/Willow Valley Watershed Analysis was completed in July 2003. The watershed analysis contains a discussion of existing recreation management and proposed changes or additions to recreation management in the Gerber area, since completion of the RMP/EIS in June 1995. Layout and design for the Miller Creek-Potholes non-motorized trail began in FY 2003. Construction of a trail to link Gerber North and South campgrounds with Miller Creek and 3 primitive campsites began in 2005. Through FY 2012, a total of nine miles of the trail have been constructed, using an Integral Youth Services program which hired high school students from Bonanza, OR. Construction of a new horse camp at Gerber campground continued in 2012. Installation of signage and finishing details is planned for 2013.

## M.16 Forest Management and Timber Resources

### Expected Future Conditions and Outputs

- Provision of a sustained yield of timber and other forest products.
- Reduction of the risk of stand loss due to fires, animals, insects, and diseases.
- Provision of salvage harvest for timber killed or damaged by events such as wildfire, windstorms, insects, or disease, in a manner consistent with management objectives for other resources.
- Maintenance or restoration of healthy ecosystems while providing for the harvest of timber and other forest products in balance with other resource values and needs.

### Implementation Monitoring

**Monitoring Question 1:** By land-use allocation, how do timber sale volumes, harvested acres, and the age and type of regeneration harvest stands compare to the projections in the SEIS ROD Standards & Guidelines and RMP management objectives?

**Monitoring Performed:** Table M-4 is a summary by land use allocation of the timber volume and acreage that has been harvested in the KFRA since the signing of the RMP on June 2, 1995. The volume and acres are summarized by harvest method, land allocation, RMP/EIS Assumed Average, and Percent of Assumed average. All KFRA westside lands are in the Southern General Forest Management Area (SGFMA). All KFRA eastside lands are outside the boundaries of the Northwest Forest Plan.

**Findings:** There are some differences between actual treatments acres and the projected average. These are discussed in detail in the section near the beginning of this monitoring report.

**Monitoring Question 2:** Were the silvicultural (for example, planting with genetically selected stock, fertilization, release, and thinning) and forest health practices anticipated in the calculation of the expected sale quantity implemented?

**Monitoring Requirements:** An annual district wide report will be prepared to determine if the silvicultural and forest health practices identified and used in the calculation of the probable sale quantity were implemented. This report is summarized in this Annual Program Summary.

**Findings:** Completed silvicultural treatments are shown in Table 2.1 and Table 19.1 of the Annual Program Summary. Calculation of the ASQ was based on successful planting of regeneration units and normal stand development unimpeded by excessive vegetative

competition or animal damage, and also taking into consideration precommercial thinning when needed. (Yield gains were not assumed for planting genetically selected trees, fertilization, or pruning.)

All timber sale silvicultural prescriptions and watershed analyses consider forest health practices. In each prescription, retention and maintenance of the more desirable but under-represented early-successional species (pines and Douglas fir) is emphasized to help increase the composition of these species in stands to more closely reflect historic conditions. These are generally located in the mixed conifer forest types in the Spencer Creek and Jenny Creek drainages. Even in the mortality salvage sales, some thinning is done around the larger old growth for reduction of understory competition. Elevated fuel level hazards are addressed in the density management sale prescriptions. All prescriptions are designed to reduce fuel loads, lower the risk of a stand replacing fire, and leave stands in a condition where post-project underburns could be implemented if determined necessary and where compatible with forest management objectives.

**Conclusion:** Silvicultural and forest health practices were anticipated and are being implemented. The excess mortality that has occurred was not anticipated and as a result, a modification in treatment prescriptions has been necessary to harvest the on-going mortality.

## M.17 Special Forest/Natural Products and Biomass

### Expected Future Conditions and Outputs

- Production and sale of special forest/natural products when demand is present and where actions taken are consistent with primary objectives for the land use allocation.
- Utilization of the principles of ecosystem management to guide the management and harvest of special forest products.

### Implementation Monitoring

**Monitoring Question 1:** Is the sustainability and protection of special forest/natural product resources ensured prior to selling special forest products?

**Findings:** To date, sustainability of special forest products has not been an issue because the demand has been primarily on special/natural products which can be readily found. Permits have been issued for wood products including; firewood, sawlogs, posts, and poles. Additional special forest products that have been sold include; juniper boughs, Christmas trees, mushrooms, greenery, lichen, cones, and transplants. When selling lichens, bryophytes, and certain fungi, resource specialists are consulted prior to issuing any unique permits.

With the recent shortage of power concerns throughout the west, there are some on-going discussions and plans for additional small cogeneration power plants that would be fueled by biomass. The KFRA has two potential sources of biomass that could be utilized for fuel. One source would be western juniper trees that have encroached on thousands of acres of rangeland. The KFRA analyzed treating up to 1,000 acres per year of western juniper in the RMP in addition to range allotment improvements where juniper cutting was also analyzed. The capability of providing western juniper on a sustained basis for power plants, and to meet the needs of the public for personal use as well, may eventually need to be addressed. Western juniper utilization (yarding) is presently being monitored by the resource area to assess short term and long-term impacts (See Water and Soils section). Another source of biomass is from the residual logging slash left on the landings as a result of timber harvests. The KFRA has historically burned residual landing piles from timber sales.

**Conclusion:** At the present time, based on the different resource evaluations completed thus far, and permits issued to date, sustainability of Special Forest Products is not threatened.

**Monitoring Question 2:** What is the status of the development and implementation of specific guidelines for the management of individual special forest/natural products?

**Findings:** The Klamath Falls Resource Area received from the Oregon State Office an updated Handbook 5400-2 addressing Special Forest Products in June of 1995. In addition, the Klamath Falls Resource Area individually develops specific harvesting guidelines for products to ensure sustainability and permit compliance. For example, for bough harvest, permit holders are required to follow specific guidelines to assure survival of the tree from which the boughs are removed. In addition, specific guidelines are written for harvesting mushrooms to ensure sustainability. Although most small sales permits generally result in minimal resource impacts, specifications are included in the permits that address weather, roads, fire risk, sustainability, cultural, and other resource concerns. In FY 2003, the KFRA updated the District Special Forest Product Handbook and included a number of new collection requirements.

The Klamath Falls Resource Area is continuing to monitor on-going juniper treatment areas. Monitoring is being designed to assess impacts from juniper cutting and in some cases removal. In addition, the plots are designed to monitor soil and vegetative impacts from the different equipment used to cut and remove the juniper. Pre and post treatment monitoring is being done (See Water and Soils section).

**Conclusion:** Based on field experience, and the small number of permits issued for products, sustainability of Special Forest Products in the immediate future is assured.

## M.18 Wildfire / Fuels Management

### Expected Future Conditions and Outputs

- Provision of the appropriate suppression responses to wildfires in order to meet resource management objectives and minimize the risk of large-scale, high intensity wildfires.
- Utilization of prescribed fire to meet resource management objectives. (This will include, but not be limited to, fuels management for wildfire hazard reduction, restoration or desired vegetation conditions, management of habitat, and silvicultural treatments.)
- Adherence to smoke management/air quality standards of the Clean Air Act and State Implementation Plan standards for prescribed burning.

### Implementation Monitoring

**Monitoring Question 1:** Have analysis and planning been completed to allow some natural fires to burn under prescribed conditions?

**Findings:** No analysis and planning were completed for FY 2012 natural fires. BLM managers have not completed adequate planning or analysis to allow natural fires to burn under certain prescribed conditions.

**Monitoring Question 2:** Do wildfire suppression plans emphasize maintaining late-successional habitat?

**Findings:** All fires in 2012 that occurred in or near late-successional habitat areas were successfully caught by initial attack resources.

**Conclusions:** The Interagency Fire Management Plan was updated in 2010 and it emphasizes maintaining late-successional habitat. The Wildland Fire Decision Support System may be utilized for fires that escape initial attack and the information in the Interagency Fire Management Plan will be referenced when decisions are made.

**Monitoring Question 3:** Are Wildfire Situation Analyses being prepared for wildfires that escape initial attack?

**Findings:** Wildfire Situation Analyses was replaced by the Wildland Fire Decisions Support System (WFDSS) in 2009. There were no fires in 2012 that required the use of a WFDSS run.

**Monitoring Question 4:** What is the status of interdisciplinary team preparation and implementation of fuel hazard reduction plans?

**Findings:** Fuels and Fire Management Plans continue to be developed in conjunction with a late-successional reserve assessments, completed by the interdisciplinary team. These LSR assessments contain recommendations for each LSR as to fuel treatments. Some LSRs require extensive actions, while others will receive no treatments at the present time.

**Conclusions:** In FY 2012, there were no fires on the west side of the resource area where late-successional habitat areas primarily exist.

## M.19 Rangeland Resources / Grazing Management

### Expected Future Conditions and Outputs

- The livestock and wild horse grazing programs will be managed under the principles of multiple use and sustained yield. Monitor the existing grazing allotments and the wild horse herd management area in compliance with the established “Coordinated Monitoring and Evaluation Plan for Grazing Allotments” for the Klamath Falls Resource Area.
- Monitoring data will be the foundation to support adjustments in the management of grazing use by livestock and wild horses. Evaluation of the monitoring data, in relation to the identified allotment objectives in this Proposed Resource Management Plan as well as future standards and guidelines, will be completed through a team of interdisciplinary resource specialists, with public review as appropriate.

### Implementation Monitoring

**Monitoring Question 1:** Are allotments and herd management area (HMA) goals and objectives being achieved with current management as specified on an allotment specific basis?

**Monitoring Performed:** Rangeland monitoring studies have been completed during FY 1995-2012 in accordance with KFRA’s Coordinated Monitoring and Evaluation Plan for Grazing Allotments. This directs the most monitoring emphasis on high priority (management category “I”) allotments, including the two allotments (Dixie and Edge Creek), which constitute the Pokegama HMA. Of particular importance are the three allotments in the Gerber Block–Horsefly, Dry Prairie, and Pitchlog - that are under ESA Section 7 Consultation.

Studies include various rangeland condition, trend, and utilization studies; riparian classification, condition, and photo trend studies; actual grazing use supervision and information; Ecological Site Inventory, or ESI (though not monitoring per se, this survey does help support and direct the other rangeland monitoring); and other rangeland monitoring studies as needed. On low priority allotments (virtually all of the “C” category allotments), monitoring is done on an as needed basis, depending on problems or concerns that arise at some given point in time. Typically this is some situational, short term grazing administration problem

that occurs on an allotment, needs some type of management attention to solve, the effects of which need monitored (usually use supervision) to ensure that the problem was properly and adequately addressed. As noted previously under the grazing section, ESI is being conducted for most of the "C" category allotments in order to have ecologically based vegetation information to assist in the preparation of upcoming Rangeland Health Standards Assessments.

The Pokegama HMA has been aerial and/or ground censused every year since completion of the KFRA ROD/RMP. In 2012, the current herd population level was estimated to be between 30-35 head, based on an on-the-ground survey completed by a student from Oregon Institute of Technology. This study was supplemented by numerous field observations during 2012. This herd level is within the established AML (Appropriate Management Level) and not in need of any removals.

**Findings:** Rangeland monitoring studies over the past 22 grazing seasons (FY 1992-2012) have found that grazing use on priority allotments is within land use planning and other pertinent resource objective levels and requirements including the five Standards for Rangeland Health for Oregon and Washington. Priority allotments include the 14 "I" category, 4 "M" category, and 1 "C" category allotments (allotment categorization is explained in the KFRA ROD/RMP - pages H-69-70). The combined acreage of these priority allotments comprises 60% of the KFRA grazing land base. Yearly priorities also include a number of "C" allotments that need attention based on a variety of grazing administration problems or issues. Recent watershed analysis efforts, allotment evaluations, and Rangeland Health Standards Assessments have supported the above finding. However, the amount of information collected is more than can be summarized in this APS; this information and the various evaluations and assessments are available at the KFRA.

For the Pokegama HMA, the herd was found to be above the determined Appropriate Management Level (AML) of 30 to 50 head in 1996 and 2000. (The AML was established based on properly evaluated rangeland monitoring studies performed over time that have determined the current number is appropriate to a self-sustaining population of healthy animals in balance with other uses and the productive capacity of their habitat.) Because the AML was exceeded, wild horse removals were necessary to get back to AML. This was accomplished by bait-trapping performed by Resource Area personnel during the spring/summer/fall of 1996 and again in May/June 2000. Twenty horses (in 1996) and 18 horses (in 2000) were removed from the HMA and transported to the wild horse corrals in Burns, Oregon for adoption via the Bureau's Adopt-a-Horse program. No removals have been done since 2000. Based on the currently slow growth rate of the herd, it is not expected that any removals will be necessary until later in the decade.

**Conclusion:** The answer to this monitoring question is "generally, yes" on a priority allotment basis. This means that allotments in the "I" and "M" categories, those that are identified for livestock use reductions in the RMP, are under ESA Section 7 consultation, contain important perennial streams, and/or have other critical resource issues, are receiving the most attention and management action and are at, or moving significantly towards, meeting Land Use Plan (LUP) objectives. The Pokegama HMA is also meeting LUP objectives and goals by being within AML and having at least adequate habitat available. Lower priority "C" allotments are generally also meeting the minimal objectives set for these areas. The currently ongoing process of assessing all allotments (including low priority "C" category ones) to ensure the meeting of the Standards for Rangeland Health will determine if allotments are meeting resource objectives, and if not, management will be adjusted to ensure the future meeting of objectives. This process, which began in 1999, is scheduled to extend through 2014.

**Monitoring Question 2:** Are the appropriate standards and guidelines, applicable to livestock and wild horse grazing, being correctly applied and followed?

**Findings:** See response to #1 above.

# GLOSSARY / ACRONYMS

**Allowable Sale Quantity (ASQ)** - An estimate of annual average timber sale volume that can be harvested from lands allocated to be planned, sustainable harvest. ASQ is used interchangeably with PSQ in this Annual Program Summary to avoid confusion related to technical differences in their definitions.

**Alternate Dispute Resolution (ADR)** - Given the complexity of the Adjudication and other water allocations issues in the Klamath Basin, the Oregon Water Resources Department (OWRD) has initiated a voluntary alternative dispute resolution (ADR) process to provide a forum to address adjudication claim issues and other matters related to water supply and demand in the Klamath Basin.

**Appropriate Management Level (AML)** - The optimum number of wild horses (or burros) within a Herd Management Area (HMA) that results in a thriving ecological balance and avoids a deterioration of the range. Numbers above the AML are considered “excess” and must be removed.

**Animal Unit Month (AUM)** - Amount of forage required to sustain one cow and calf, or one horse, or five sheep, for one month.

**Annual Program Summary (APS)** - A review of the programs on a district or resource area for a specific time period, usually a fiscal year (FY).

**Aquatic Conservation Strategy (ACS)** - A strategy developed to restore and maintain the ecological health of watersheds and aquatic ecosystems within the planning area addressed by the Northwest Forest Plan.

**Areal extent** – In soil monitoring, a quantifiable measurement that is a comparison of pretreatment undisturbed project area and post treatment project disturbance area. Further defined as area of detrimental conditions: leave a minimum of 80% of area (including permanent transportation system) in an acceptable productivity potential for trees and other managed vegetation.

**Archaeological Site** - A geographic locale that contains the material remains of prehistoric and/or historic human activity.

**Archaeological Resource Protection Act (ARPA)** - (P.L. 96\_95; 93 Stat. 721; 16 U.S.C. 470aa et seq.) as amended (P.L. 100\_555; P.L. 100\_588) - provides felony-level penalties, more severe than those of the Antiquities Act of 1906 (see .03A), for the unauthorized excavation, removal, damage, alteration, defacement, or the attempted unauthorized removal, damage, alteration, or defacement of any archaeological resource, more than 100 years of age, found on public lands or Indian lands. The act also prohibits the sale, purchase, exchange, transportation, receipt, or offering of any archaeological resource obtained from public lands or Indian lands in violation of any provision, rule, regulation, ordinance, or permit under the act, or under any Federal, State, or local law. No distinction is made regarding National Register eligibility. The act establishes definitions; permit requirements, and criminal and civil penalties, among other provisions, to correct legal gaps and deficiencies in the Antiquities Act (see .03A). The act overlaps with and partially supersedes the Antiquities Act.

**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.

**Biological Opinion (BO)** - A determination reached for endangered fish or wildlife species that is issued by the USFWS through consultation with another agency. This opinion evaluates the potential impacts to a species from a specific project and provides recommendations for protection of the viability of the species.

**Board Foot** - A unit of solid wood, one-foot square and one inch thick.

**Bulk Density** - Soil bulk density is the ratio of mass to volume for a given sample of soil and is commonly used as a measure of the compaction of a given soil. The higher the bulk density value, the more compact a soil is. Bulk density is expressed in grams/cubic centimeter (g/cm<sup>3</sup>). Water at room temperature (25 degrees C.) and 1 atmospheric pressure has a bulk density of 1.0 g/cm<sup>3</sup>.

**Bureau Assessment Species** – (Refer to “Special Status Species”)

**Bureau of Land Management (BLM)** - Agency within the Department of the Interior charged with management of the public lands.

**Bureau Sensitive Species** - (Refer to “Special Status Species”)

**Candidate Species** - (Refer to “Special Status Species”)

**Categorical Exclusion (CX)** - A categorical exclusion is used when it has been determined that some types of proposed activities do not individually or cumulatively have significant environmental effects and may be exempt from requirements to prepare an environmental analysis. Categorical exclusions (CX) are covered specifically by Department of Interior and BLM guidelines.

**Cavity Nesters** - Wildlife species, most frequently birds, that require cavities (holes) in trees for nesting and reproduction.

**Clean Water Act (CWA)** - the Clean Water Act is the primary Federal statute governing the restoration and maintenance of the chemical, physical, and biological integrity of the Nation’s waters.

**Coarse Woody Debris (CWD)** - Woody pieces of trees that have been detached from their original source of growth (dead trees that are not self-supporting shall be considered severed). This includes uprooted trees and any severed stems or branches attached to them. It does not include: live trees, dead limbs or branches attached to a dead tree, stumps, dead foliage, bark, or designated shrub species.

**Coordinated Resource Management Plan (CRMP)** - A resource management plan covering a specific geographical area, typically with a mixed land ownership pattern, that coordinates with all interested land owners and affected government agencies to manage for a wide array of resources and resource concerns. This process emphasizes mutually agreed upon goals and a cooperative, instead of confrontational, approach.

**Council on Environmental Quality (CEQ)** - Government agency with oversight of the implementation of the National Environmental Policy Act (NEPA).

**Cubic Foot (CF)** - A unit of solid wood, one foot square and one foot thick.

**Cultural Resource** - objects, sites and information of historic, prehistoric, archeological, architectural, paleontological or traditional significance.

**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 (DM)** - 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.

**Department of Environmental Quality (DEQ)** - A department of Oregon State government with responsibilities to oversee the state’s environmental laws.

**Diameter at Breast Height (DBH)** - The diameter of a tree 4.5 feet above the ground on the uphill side of the tree.

**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 PSQ.

**Ecological Site Inventory** - BLM's rangeland survey method has four seral stages based on similarity to the perceived Potential Natural Community. Those stages are Early Seral, Mid Seral, Late Seral and Potential Natural Community.

**Ecosystem Restoration Office (ERO)** - The ERO is an interagency office which is operated cooperatively by the U.S. Fish and Wildlife Service, Bureau of Reclamation, U.S. Forest Service and the BLM. This interagency office provides funding, technical assistance, and monitoring for watershed restoration projects which are proposed by the Upper Klamath Basin Working Group. This group works closely with the Klamath Basin Provincial Advisory Committee and watershed councils within the Klamath Basin.

**EIS Special Attention Species** - A term that incorporates the "Survey and Manage" and "Protection Buffer" species from the Northwest Forest Plan.

**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** - (Refer to "Special Status Species")

**Endangered Species Act (ESA)** - Act created in 1973 that identified a National List (administered by the USFWS) of any plant, animal, or fish that is in danger of extinction throughout all or a significant portion of its range. Prior to implementation of projects, a consultation process with USFWS is required for species that have threatened, proposed, and candidate status.

**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.

**Environmental Education Area** - Area used to inform and educate the public on topics relating to the environment(s) found within the KFRA.

**Environmental Impact Statement (EIS)** - Type of document prepared by Federal agencies in compliance with the National Environmental Policy Act (NEPA) that identifies the environmental consequences of proposed major Federal actions expected to have significant impacts on the human environment.

**Federal Energy and Regulatory Commission (FERC)** - Government agency with responsibility for issuing permits and license for power projects.

**Fiscal Year (FY)** - Budgeting year for the BLM from October 1 through September 30 each year. Geographic Information System (GIS) - Computer Database of resource information. Global Positioning System (GPS) - Satellite technology used to locate a specific point on the ground. Green Tree Retention (GTR) - Within the KFRA, a term for leaving green trees in a stand when planning a regeneration cut timber sale. Typically, between 16-25 trees per acre, will be retained in the stand.

**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.

**Herd Management Area (HMA)** - Public land under the jurisdiction of the Bureau of Land Management that has been designated for special management emphasizing the maintenance of an established wild horse herd. HMAs are defined by the "Wild Free-Roaming Horse and Burro Act" of 1971.

**Interdisciplinary Team (IDT)** - A team of resource specialists organized by agencies to prepare environmental documents.

**Integrated Weed Control Plan (IWCP)** - The plan and programmatic EA for noxious weed management within the KFRA approved in 1993.

**Intermountain West Joint Venture (IWJV)** - The IWJV was formed in 1995 and covers eastern Oregon and parts of nine other western states. This group meets quarterly and is in the process of writing an area plan to determine conditions of wetlands and identify opportunities to improve wetland habitat. The plan (in development) will focus on the Klamath Basin eco-region. This plan, as well as other eco-regions plan within the ten western states, is following the guidelines outlined under the North American Wetlands Conservation Act of 1989. The representatives for the Klamath Basin eco-region are BLM, Ducks Unlimited, Oregon Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Modoc National Forest, California Fish and Game, and Oregon Joint Venture. The plan is expected to be completed within two years.

**Klamath Falls Resource Area (KFRA)** - That portion of the BLM/Lakeview District located in the south end of Klamath County.

**Land Use Allocation (LUA)** - Allocations that define uses and or activities that are allowable, restricted, and prohibited. They may be expressed in terms of area such as acres or miles. Each allocation is associated with a specific management objective.

**Late-Successional Reserves (LSR)** - Lands managed to maintain and restore old-growth forest conditions.

**Matrix Lands** - Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels.

**Memorandum of Understanding (MOU)** - A document between agencies or sovereign nations, such as an Indian tribe, that discloses the protocol for how each party will coordinate and consult with each other relative to a particular activity or activities.

**Million Board Feet (MMBF)** - An expression of volume of trees harvested from timber sales, in millions of board feet.

**Monitoring and Evaluation** - Collection and analysis of data to evaluate the progress and effectiveness of on-the-ground actions in meeting resource management goals and objectives.

**Mortality Salvage** - Timber sales designed to utilize mortality (dead and /or dying trees). This primarily involves only the removal of the mortality within the stand. Normally, less than 10% of the volume removed is live trees in the mortality salvage sales.

**National Environmental Policy Act of 1969 (NEPA)** - Law requiring all federal agencies to evaluate the impacts of proposed major Federal actions with respect to their significance on the human environment.

**National Historic Preservation Act (NHPA)** - An act to establish a program for the preservation of additional historic properties throughout the nation, and for other purposes. This act extends the policy in the Historic Sites Act to include State and local as well as national significance, expands the National Register of Historic Places, and establishes the Advisory Council on Historic Preservation, State Historic Preservation Officers, and a preservation grants-in-aid program.

**Natural Resource Conservation Service (NRCS)** - A Federal agency that helps private landowners correct resource problems occurring on their land.

**Northwest Forest Plan (NFP)** - The plan for management of Forest Service and Bureau of Land Management late-successional and old-growth forest lands within the range of the northern spotted owl.

**Noxious Plant/Weed** - A plant designated by the U.S. Department of Agriculture, or state or local weed board, as being injurious to public health, recreation, wildlife, or any public or private property.

**O&C Lands (O&C)** - Public lands granted to the Oregon and California Railroad Company, and subsequently re-vested to the United States, that are managed by the Bureau of Land Management and Forest Service 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. It should be noted that for this Annual Program Summary, offered is considered the same as sold.

**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.

**Oregon Department of Agriculture (ODA)** - A branch of Oregon State Government with responsibilities for agricultural activities, noxious weed management, and native plant conservation.

**Oregon Department of Environmental Quality (ODEQ)** - A department of Oregon State government with responsibilities to oversee the state's environmental laws.

**Oregon Department of Fish and Wildlife (ODFW)** - A branch of Oregon State Government with responsibilities for managing wildlife populations on federal and state lands.

**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.

**Payment in Lieu of Taxes (PILT)** - Federal payments to local governments to offset losses in property taxes due to nontaxable Federal lands within their boundaries. BLM is responsible for calculating the payments according to formulas established by law and distributing the funds appropriated by Congress.

**Pre-commercial Thinning (PCT)** - 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 and designed to accomplish definite, define objectives.

**Probable Sale Quantity (PSQ)** - An estimated average annual volume that can be harvested from lands allocated to planned, sustainable harvest. PSQ is used interchangeably with ASQ in this Annual Program Summary to avoid confusion related to technical differences in their definitions.

**Projected Acres** - These "modeled" age class acres are estimates derived from modeling various silvicultural prescriptions for regeneration, commercial thinning and density management harvest. Modeled age class acre projections may or may not correspond to "Offered" or "Harvested" age class acres at a given point in the decade. Additional age classes are scheduled for regeneration, commercial thinning and density management harvest at other points in the decade.

**Protection Buffer Species** - Species designated in the Northwest Forest Plan that provides for specific management of known sites for these species, and, in many cases, requires surveys prior to ground disturbing activities.

**Rangeland Program Summary (RPS)** - A BLM planning document typically completed in conjunction with an RMP Record of Decision that lays out the specifics for grazing management by grazing allotment. This includes allotment specific resource objectives, level and season of use, allotment categorization, wildlife allocations, and other information relevant to a given allotment.

**Resource Apprentice Program for Students (RAPS)** - A work experience program for high school students intended to give the students actual experiences in natural resource management.

**Regeneration Harvest** - Timber harvest with the objective of opening a forest stand enough to regenerate desired tree species.

**Regional Ecosystem Office (REO)** - Office established to provide staff work and support to the Regional Interagency Executive Committee (RIEC) so the standards and guidelines in the Northwest Forest 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. Each RNA is also an Area of Critical Environmental Concern (ACEC).

**Resources and People (RAP) Camp** - This camp is designed to inform students (ages 15-18) and educators about natural resource management and careers working with natural resources.

**Resource Management Plan (RMP)** - A land use plan prepared by the BLM under current regulations in accordance with the Federal Land Policy and Management Act.

**Right-of-Way (ROW)** - A permit or 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.

**Riparian Reserve (RR)** - Riparian Reserves are portions of watersheds where riparian-dependent resources receive primary emphasis and where special standards and guidelines apply. Riparian Reserves occur at the margins of standing and flowing water, intermittent stream channels and ephemeral ponds, and wetlands.

**Rural Interface Areas (RIA)** - 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. (See also WUI.)

**Seral Stages (Eastside rangeland communities)** - The series of relatively transitory plant communities that develop during ecological succession from a community with no native plants (or possibly bare ground) to the potential natural community (PNC or climax) stage. There are four levels recognized by the Ecological Site Inventory, each of which is defined as the present state of vegetation on an ecological site in relation to the historic climax plant community for the site. The four stages are defined (for our area) as follows:

**Early Seral** – A plant community that exhibits 0-25% similarity to the historic climax plant community. Often these communities are dominated by exotic annual plant species or native species that are not typically found on the site (e.g. western juniper dominated sites that should not have much juniper). Site typical plant species are sparse to (rarely) absent.

**Mid Seral** - A plant community that exhibits 26-50% similarity to the historic climax plant community. These sites may or may not have functional plant communities, typically have a distinct overabundance of shrubs and/or juniper, have significant amounts of exotic annuals, and typically, have less than half of the climax quantity of perennial native grasses.

**Late Seral** – A plant community that exhibits 51-75% similarity to the historic climax plant community. These communities are often very functional and stable, but may have a slight overabundance of shrubs or tree species, a slight to moderate under-abundance of native perennial grasses, and have some quantity of non-site typical plants species. Exotic annuals are sparse, though often present in small to insignificant quantities.

**Potential Natural Community (PNC)** – A plant community that has 76-100% of the historic climax plant community present. These are typically the most ecologically functional – and often stable - plant community that can exist on a site. Exotic annuals are rare to nonexistent.

**Seral Stages (Westside forest communities)** - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage. There are five stages recognized in forest succession:

**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 for wildlife may be produced.

**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 about 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 of about 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 disturbances the forest structure will be more even-aged at late mature or early old growth stages.

**Silvicultural Prescription** - A professional plan for controlling the establishment, composition, constitution, and growth of forests.

**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 condition can be created by altering ground cover, soil or microsite conditions, using biological, mechanical, or manual clearing, prescribed burns, or a combination of methods.

**Southern General Forest Management Area (SGFMA)** (See Matrix) - Forest land managed on a regeneration harvest cycle of 60-110 years. All Matrix lands south of Grants Pass, Oregon are designated as SGFMA.

**Special Recreation Management Area (SRMA)** - Area having commitment to provide specific recreation activity and experience opportunities. These areas usually require high level of recreation investment and/or management. Include, but not limited to, recreation sites.

**Special Status Species** - Plant or animal species falling into any one of the following Federal, State, or BLM status categories:

**FEDERAL STATUS (USFWS)**

**Endangered** – Any species defined through the Endangered Species Act as being in danger of becoming extinct within the foreseeable future throughout all or a significant portion of their range. Listings are published in the Federal Register.

**Threatened** - Any plant or animal species defined under the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Listings are published in the Federal Register.

**Listed Endangered (LE)** - Taxa listed by the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) as Endangered under the Endangered Species Act (ESA), or by the Departments of Agriculture (ODA) and Fish and Wildlife (ODFW) of the state of Oregon under the Oregon Endangered Species Act of 1987 (OESA).

**Listed Threatened (LT)** - Taxa listed by the USFWS, NMFS, ODA, or ODFW as Threatened. Proposed Endangered (PE) - Taxa proposed by the USFWS or NMFS to be listed as Endangered under the ESA or by ODFW or ODA under the OESA.

**Proposed Threatened (PT)** - Taxa proposed by the USFWS or NMFS to be listed as Threatened under the ESA or by ODFW or ODA under the OESA.

**Candidate (C)** - Taxa for which NMFS or USFWS have sufficient information to support a proposal to list under the ESA, or which is a candidate for listing by the ODA under the OESA. There are two categories of primary concern to BLM:

**Category 1** - Taxa for which the USFWS has substantial information on hand to support proposing the species for listing as threatened or endangered. Listing proposals are either being prepared or have been delayed by higher priority listing work.

**Category 2** - Taxa for which the USFWS has information to indicate that listing is possibly appropriate. Additional information is being collected.

**Species of Concern (SoC)** - Former C2 candidates which need additional information in order to propose as Threatened or Endangered under the ESA. These are species which USFWS is reviewing for consideration as Candidates for listing under the ESA.

#### **BUREAU STATUS (BLM)**

**Bureau Sensitive (BS)** - According to the definition in the Bureau 6840 policy, BS designation includes species that could easily become endangered or extinct in a state. They are restricted in range and have natural or human-caused threats to survival. BS species are not FE, FT, FPE, FPT, FC, SE, or ST, but are eligible for federal or state listing or candidate status. BS species are designated by the State Director and are tiered to the state fish/wildlife/botanical agencies' or ONHP designations. BS species that are Oregon state Critical - animals and Candidates - plants, Washington state Sensitive - animals and Threatened and Endangered - plants, or ONHP List 1 are considered BS species.

**Bureau Assessment (BA)** - Bureau Assessment is category that pertains to OR/WA BLM only per the OR/WA BLM 6840 policy. Plant and wildlife species which are not presently eligible for official federal or state status but are of concern in Oregon or Washington may, at a minimum, need protection or mitigation in BLM activities. These species will be considered as a level of special status species separate from BS, and are referred to as BA species.

**Bureau Tracking (BT)** - Bureau Tracking is a status that pertains to OR/WA BLM only per the BLM OR/WA 6840 policy. To enable an early warning for species which may become of concern in the future, districts are encouraged to collect occurrence data on species for which more information is needed to determine status within the state or which no longer need active management. Until status of such species changes to federal or state listed or proposed, FC, BS or BA species, BT will not be considered as special status species for management purposes.

#### **STATE STATUS (ODFW)**

**Critical (SC)** - Species for which listing as threatened or endangered is pending; or those for which listing as threatened or endangered may be appropriate if immediate conservation actions are not taken. Also considered critical are some peripheral species which are at risk throughout their range, and some disjunct populations.

**Vulnerable (SV)** - Species for which listing as threatened or endangered is not believed to be imminent and can be avoided through continued or expanded use of adequate protective measures and monitoring. In some cases the population is sustainable, and protective measures are being implemented; in others, the population may be declining and improved protective measures are needed to maintain sustainable populations over time.

**Peripheral or Naturally Rare (SP)** –Peripheral species refer to those whose Oregon populations are on the edge of their range. Naturally rare species are those which had low population numbers historically in Oregon because of naturally limiting factors. Maintaining the status quo for the habitats and populations of these species is a minimum requirement. Disjunct populations of several species which occur in Oregon should not be confused with peripheral.

**Undetermined Status (SU)** - Animals in this category are species for which status is unclear. They may be susceptible to population decline of sufficient magnitude that they could qualify for endangered, threatened, critical or vulnerable status, but scientific study will be required before a judgment can be made.

#### **OREGON NATURAL HERITAGE PROGRAM STATUS (ONHP)**

**List 1** contains taxa that are threatened with extinction or presumed to be extinct throughout their entire range.

**List 2** contains taxa that are threatened with extirpation or presumed to be extirpated from the state of Oregon. These are often peripheral or disjunct species which are of concern when considering species diversity within Oregon's borders. They can be very significant when protecting the genetic diversity of a taxon. ONHP regards extreme rarity as a significant threat and has included species which are very rare in Oregon on this list.

**List 3** contains species for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.

**List 4** contains taxa which are of conservation concern but are not currently threatened or endangered. This includes taxa which are very rare but are currently secure, as well as taxa which are declining in numbers or habitat but are still too common to be proposed as threatened or endangered. While these taxa currently may not need the same active management attention as threatened or endangered taxa, they do require continued monitoring.

**State Listed Species** - Any plant or animal species listed by the state of Oregon as threatened or endangered within the state under ORS 496.004, ORS 498.026, or ORS 564.040. (See above.)

**Survey and Manage** - As outlined in the Northwest Forest Plan, the survey and manage standards and guidelines; provide benefits to old-growth associated species, which are considered to be at risk even after establishment of mapped and unmapped Late-Successional reserves.

**Target Volume** - As used in the document, target volume refers to the volume to be offered for sale as directed by the resource area annual budget.

**The Nature Conservancy (TNC)** - An environmental group that promotes returning managed lands to their historical or natural state.

**Threatened Species** - (Refer to "Special Status Species")

**Thousand Board Feet (MBF)** - An expression of volume of trees harvested from timber sales in thousands of board feet.

**Timber Sale Information System (TSIS)** - The national information system that tracks all facets of a timber sale/salvage.

**Total Maximum Daily Load (TMDL)** - A tool for implementing State water quality standards. It is based on the relationship between pollution sources and in-stream water quality standards. The TMDL establishes allowable pollutant loadings or other quantifiable parameters (such as temperature) for a water body and thereby provides the basis for States to establish water quality-based controls.

**Transportation Management Plan (TMP)** - The transportation plan developed for a specific area or by a specific agency that provides how and what kinds of vehicles are allowed in that area.

**Unmapped Late Successional Reserves (UMLSR)** - a small block of forest approximately 100 acres in size designated around known spotted owl activity centers located on lands in the matrix. UMLSRs were established under the direction of the Northwest Forest Plan (NFP), but are not displayed on regional maps in the NFP. The objective for these areas is to protect and restore conditions for a variety of late successional and old growth dependent species.

**Understory Reduction** - Timber cutting done to reduce the density of primarily sub-merchantable (3-7 inch diameter) shade-tolerant species in the understory for the purpose of reducing fire risk and ladder fuels, as well as to enhance health of overstory trees.

**United States Fish and Wildlife Service (USFWS)** - That branch of the Federal Government with responsibility for enforcing the Endangered Species Act and managing the network of National Wildlife Refuge System Lands.

**United States Forest Service (USFS)** - An agency within the Federal Department of Agriculture with responsibility for management of the Federal National Forests.

**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.

**Water Quality Management Plan (WQMP)** - Plans required by the State of Oregon for management of rivers and tributaries to assure that total maximum daily loads are not exceeded.

**Water Resources Department (WRD)** - The Oregon Water Resources Department (WRD) initiated the Klamath Basin Adjudication in 1975. The Klamath Adjudication is an Oregon general water claim adjudication in which the final decree will be issued by the Klamath County Circuit Court. All Adjudication claims were filed with the WRD by April 1997. The Adjudication is the first Oregon general water adjudication in which complex federal claims have been filed.

**Watershed Council** - There is ongoing participation with the Klamath Watershed Council. The BLM is represented on the Councils' Technical Advisory Committees. The council is active in coordinating watershed and water quality enhancement projects.

**Whitewater Rafting** - The recreational activity of running a river in a rubber raft or other river non-motorized craft usually when river flows are high.

**Wild & Scenic River System (W&S)** - 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 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.

**Wilderness Study Area (WSA)** - Public land under the jurisdiction of the Bureau of Land Management that has been studied for wilderness character and is currently in an interim management status awaiting official wilderness designation or release from WSA status by Congress.