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Winema  
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Forest

Forest Management  
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# WINEMA NATIONAL FOREST

## Monitoring & Evaluation Report

### Fiscal Year 1998



# KEY FINDINGS

**Ecosystem Restoration.** The Klamath Basin has been the focus of extraordinary ecosystem restoration efforts in agricultural lands, wetlands, forested uplands, and riparian systems. The endangered species, water quality, and water quantity problems, with their associated agricultural, tribal, and social and economic impacts in this basin has demanded Congressional attention and attracted millions of dollars for study and active restoration. The Winema National Forest has been and is now cooperating and partnering with the Klamath Tribes, Bureau of Reclamation, Bureau of Land Management, Oregon Department of Environmental Quality, Oregon Department of Forestry, Environmental Protection Agency, the US Fish and Wildlife Service, Klamath County, Oregon Department of Agriculture, Natural Resources Conservation Service, local communities, and local watershed councils to restore habitats and improve water quality and quantity throughout the basin. Data collection, large scale wetland restoration, riparian habitat enhancement, and the addressing of point and non-point source pollution problems are progressing full speed in and around the Winema National Forest.

The Forest's efforts have expanded well beyond the scope envisioned in the Forest Plan. For example, projections of range improvements and wildlife habitat improvements were not included in the Forest Plan. The Plan did estimate ten acres per year of watershed improvement. In the seven years where figures are available, that average has been over 140 acres per year. In other categories, the decrease in road miles in 1998 was the result of a concerted effort in the Lone Pine Area and other parts of the Forest. These closures have contributed to improvements in natural ecosystems by removing the effects those roads had on drainage patterns. In the past, roads were constructed across meadows with only one location for water to pass. This tends to collect water that can lead to erosion. The channeling of the broad flow of water across these areas can also dewater portions of the riparian area. During 1998, the Forest repaired some of these situations by adding additional culverts and installing permeable gravel bases under roads to allow more free passage of water without the ill effects of concentrated flows. Several small headcut stabilization structures were installed in Wright's Meadow (Copperfield Draw). These structures are designed to reduce erosion. Another problem, due to the continued suppression of fire, has been the encroachment of lodgepole pine into meadows. This encroachment tends to increase shade thus eliminating grasses and changing the original diverse ecosystem to more of a monoculture. The lodgepole pine was physically removed from some of these areas to allow the habitat to return to its natural state and to allow maintenance of that habitat by occasional burning of the grasses.

The highest priority of our Soil and Water program is the completion of Watershed Assessments and Water Quality Restoration Plans coordinated with the Fremont National Forest. Together we have prioritized the South Fork of the Sprague, the Upper Williamson, the North Fork of the Sprague, Sycan, and the Lower Sprague. The Watershed Assessments will identify the cumulatively significant restoration projects which will drive the Water Quality Restoration Plans and be the drivers for future restoration work. This work is expected to focus on road obliteration, riparian enhancement, in stream morphology and habitat improvements. The Winema National Forest has been a leader in this basin in water quality data collection. In light of high costs and limited budgets, the Forest has had to defer detailed analysis of some of this data. Our findings do affirm State findings of high water temperatures in some streams during low flow periods which led the State to label some streams as "water quality limited." Best Management Practices are being identified and carried into project development. Efforts are under way to better document whether the best management practices are being properly applied on the ground and having the desired effects.

**Employee Involvement.** The Winema's employees have chaired and served on TMDL (total maximum daily load) committees for water quality limited rivers and lakes. Their leadership and expertise has been provided on multi-thousand acre wetland restoration projects in the basin and they have worked closely with local watershed councils. The Winema National Forest has been an active participant in the Upper Klamath Basin (Hatfield) Working Group, responsible for many of the significant and effective restoration efforts to date.

**Implementation of Standards and Guidelines** continues to be a focus of Forest monitoring. During the year, the Forest Management Team and resource specialists examined several areas of the Forest to see whether projects were being implemented in accordance with Forest Plan standards and guidelines. With very few and minor exceptions appropriate standards and guidelines are being implemented. Additional effort is focussing on whether implementation is having the desired effects.

**Threatened, endangered and sensitive species** are doing well in those cases where there is sufficient information to make an informed judgement. Recovery of bald eagle has been successful. Research indicates that productivity of eagles in the Klamath Basin is the highest in the state and recovery population goals have been exceeded. Spotted owl populations are at the anticipated levels in Late Successional Reserves on the Klamath Ranger District with stable population levels of about 95 to 100 birds. Late Successional Reserves on the Chemult and Chiloquin Districts contain inadequate or marginal owl habitat and are not expected to provide for continued spotted owl populations. In general, sensitive plants have not been monitored for a long enough period to establish trends. A number of forest activities in the ongoing and planning stages were analyzed for effects to Lost River and shortnosed suckers. Activities are being designed for some level of improvement (upward trend) in habitat condition for listed suckers (e.g. reduced sediment yield, improved water quality or discharges). Biological assessments on on-going activities and recovery projects are being implemented for bull trout.

## ACCOMPLISHMENT OF OUTPUTS AND SERVICES

Monitoring Item	Plan	1991	1992	1993	1994	1995	1996	1997	1998	Remaining for Plan Period
<b>Allowable Sale Quantity</b> MMCF/Year	19.4	15.8	2.0	21.5	2.0	6.2	8.4	4.9	0.5	66.4 MMCF per year
<b>Timber Sale Program Quantity</b> MMCF/Year MMBF/Year	34.7 166.8	23.7 119.2	8.8 49.0	31.8 158.6	2.9 16.3	6.7 33.5	13.1 68.0	6.9 35.3	2.2 11.1	125 MMCF Per Year 588.5 MMBF Per Year
<b>Dead Lodgepole Pine Sold</b> MMCF/Year MMBF/Year	11.5 40.2	6.1 30.8	6.3 36.5	9.9 48.7	0.9 4.2	2.4 12.6	5.4 27.1	1.9 9.9	1.4 7.5	40.3 MMCF Per Year 112.3 MMBF Per Year
<b>Ponderosa Pine Sold</b> MMCF/Year MMBF/Year	8.8 53.9	6.0 30.2	1.5 7.7	18.1 91.3	0.9 4.4	2.3 11.6	4.9 26.6	1.2 5.7	0.4 2.0	26.3 MMCF Per Year 179.7 MMBF Per Year
<b>Silvicultural Treatments</b> (Ac/Year)										
Commercial Thins	2,700	2,300	0	200	549	2,688	3,337	5,012	119	6,398 Acres Per Year
Overstory Removal	1,600	900	200	200	162	0	0	0	0	7,269 Acres Per Year
Regeneration Harvest	500	200	100	0	1,285	1,054	3,530	0	0	0 Acres Per year
Selection Harvest	8,400	7,400	800	2,500	619	2,851	5,576	228	862	31,582 Acres Per Year
Salvage Cut - Lodgepole	13,700	6,700	6,300	100	0	975	8,290	2,209	1,672	55,377 Acres Per Year
<b>Reforestation (Acres/Year)</b>	6,400	7,833	6,590	9,204	10,137	8,951	5,821	4,408	3,626	3,715 Acres Per Year
<b>Timber Stand Improvement</b> (Acres/Year)	14,400	6,660	7,265	8,644	8,181	6,032	8,930	2,704	3,734	45,925 Acres Per Year
<b>Fuel Treatment</b>	27,600	30,961	23,286	14,236	25,469	9,497	10,233	10,833	6,865	72,310 Acres Per Year
<b>Road Construct/Reconstruct</b> (Miles/Year)										
Forest Road Program	22	2.0	2.3	2.0	2.7	6.7	0.4	2.2	9.4	192.3 Miles Remaining
Timber Purchaser Roads	31	27.6	0.0	0.0	0.0	0.0	2.8	6.4	0	273.2 Miles Remaining
<b>Total Road System (Miles)</b>	5,517	6,200	6,200	6,208	6,208	6,208	6,208	6,298	6,136	619 Miles to Reduce
<b>Road Access Mgmt (Miles)</b>										
Open For Use	-	4,932	5,030	5,106	4,938	4,938	4,938	5,028	4,866	Not Projected
Closed to Use	-	1,268	1,170	1,102	1,270	1,270	1,270	1,270	1,270	Not Projected
<b>Road Access Type (Miles)</b>										
Passenger Car	510	490	490	483	483	483	483	483	483	Need 27 More Miles
High Clearance Vehicle	2,120	2,376	2,376	2,361	2,360	2,360	2,360	2,425	2,379	Need 259 Fewer Miles
Intermittent Access	2,887	3,345	3,345	3,365	3,365	3,365	3,365	3,390	3,274	Need 387 Fewer miles
<b>Developed Rec Construct</b> (PAOT)	695	90	140	80	0	0	0	0	0	385 PAOT (55% Left)
<b>Trail Constrc/Reconstrc (Mi)</b>	124	1.0	15.0	4.1	7.5	0.1	49.5	0	0.25	46.6 Miles (38% Left)
<b>Permitted Livestock (AUM)</b>	13,000	13,000	13,000	14,418	10,102	6,090	5,361	7,000	7,780	26,624 AUM per Year
<b>Range Improvements</b>										
Structures	-	11	5	6	0	10	8	3	2	No value established in the Forest Plan
Acres	-	2	13	10	0	0	0	0	0	
<b>Habitat Improvement</b>										
<b>T&amp;E Species</b>										No value established in the Forest Plan
Structures	-	0	45	0	0	25	2	3	3	
Acres	-	115	130	25	299	172	175	43	60	
<b>Other Species</b>										
Structures	-	2,834	516	255	549	1,533	1,020	1,233	1,041	
Acres	-	320	2,618	979	2,624	3,379	3,870	653	278	
<b>Watershed Improvements</b>										
Structures	-	NA	NA	NA	2	13	0	9	0	No value established None
Acres	10	72	9	NA	107	292	290	32	180	

The Forest's **timber program** includes vegetation management projects designed to restore sustainable forest conditions and watershed health in landscapes where risk of catastrophic fire or insect loss is high. These projects combine both non-commercial and commercial means. Some of them use timber sales and provide commercial products which will help sustain local communities economically, though this is not their primary purpose. These projects are designed to sustain old growth conditions; protect spotted owl habitat connectivity between Late Successional Reserves and Crater Lake National Park; rehabilitate meadows, hardwoods, and riparian habitats; treat forests for fire, tussock moth, budworm, and root rot risks; and reintroduce fire's function in the system. These projects also contain road closures, obliteration, and relocation. Timber harvest levels on the Forest remain well below the levels anticipated in the original Forest Plan or the Forest Plan as amended. Several factors cause this. They include continuing appeals and litigation over virtually every timber management project that is proposed. Also the Eastside Screen amendments (Forest Plan Amendments 7 and 8) limited the types of trees that can be harvested, but did not adjust the allowable sale quantity for the Forest accordingly. The low levels of commercial timber harvest is beginning to have effects upon mule deer habitats which are losing the critical forage component. It also continues to depress economic activity in the area and compounds problems with other floundering sectors. The Forest intends to readdress the relationships between timber management, wildlife habitat, and socio-economics and revise the Forest Plan accordingly.

**Wildlife populations** are being affected by habitat changes. A recent study (Peek, Korol and Dennis, 1999, in press) compared forage production capability given habitat conditions in 1953 and in 1988 for the Sprague area. Forage production capability had dropped by 65.5 percent from 1953 to 1988 as the result of increased timber canopy cover. As noted above, the lack of timber harvest activity, or fire, blow-down or other natural disturbances is allowing cover to continue to increase thus continuing the reduction in forage for mule deer and possibly adversely affecting mule deer populations. The limited amount of direct habitat improvements that have been funded have had a marginal affect, if any, on deer populations. Elk populations, on the other hand, require different types of habitat and continue to grow with sufficient forage in wet meadows and on private agricultural lands. With shifts from younger to older forest habitats and less edge condition, wildlife species are beginning to shift to those favored by the new habitat conditions.

**Forest health** concerns have shifted from lodgepole pine beetle problems on the north end of the Forest, which has been well controlled, to mortality on the south end of the Forest. The western pine beetle together with mountain pine beetle caused mortality in large ponderosa pine trees used by Bald Eagles for nesting and roosting near Upper Klamath Lake. Tree mortality due to fir engraver beetle was high, but has declined on South Chiloquin and on Klamath District. Stress on fir trees was compounded by the drought of prior years. Ground examinations indicate that some areas had the white fir nearly eliminated from the stand. While mortality has declined with wetter weather, the dead vegetation remains. The implications for fire hazard and wildlife habitat are considerable. Timber management activities are now being developed to address these issues.

**Outputs of goods and services** shows, numerically, what the Forest has produced in comparison to what was planned. The table on page 3 reveals that the Forest has produced well below planned levels in all categories that involve ground disturbing work, except reforestation and watershed improvements. This highlights the major emphasis on ecosystem restoration. The timber related outputs are low for the reasons discussed above. The recreation related outputs are generally low due to insufficient funding to do the planned work. Permitted livestock use is low due to low demand from potential permittees.

Monitoring the **social and economic setting** revealed that Forest Service activities have been well below planned levels, thus the associated activity in the local economy has been much less than originally anticipated.. This translates to a unemployment rate still well above the national and state averages and payments to the county that have created significant difficulties in budgeting for roads and schools. Sectors of the economy other than those directly affected by Forest Service programs have displayed mixed performance. The Winema National Forest has facilitated the development of strong cooperative efforts among Federal, state and local governments and private sector organizations (both non-profit and for-profit). The aim has been building basic infrastructure, enhancing the area's attractiveness and directly recruiting new business. Efforts are generally focusing on tourism, new forest products (e.g. juniper), agriculture, light industrial and telecommunications oriented businesses.

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