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Forest Service

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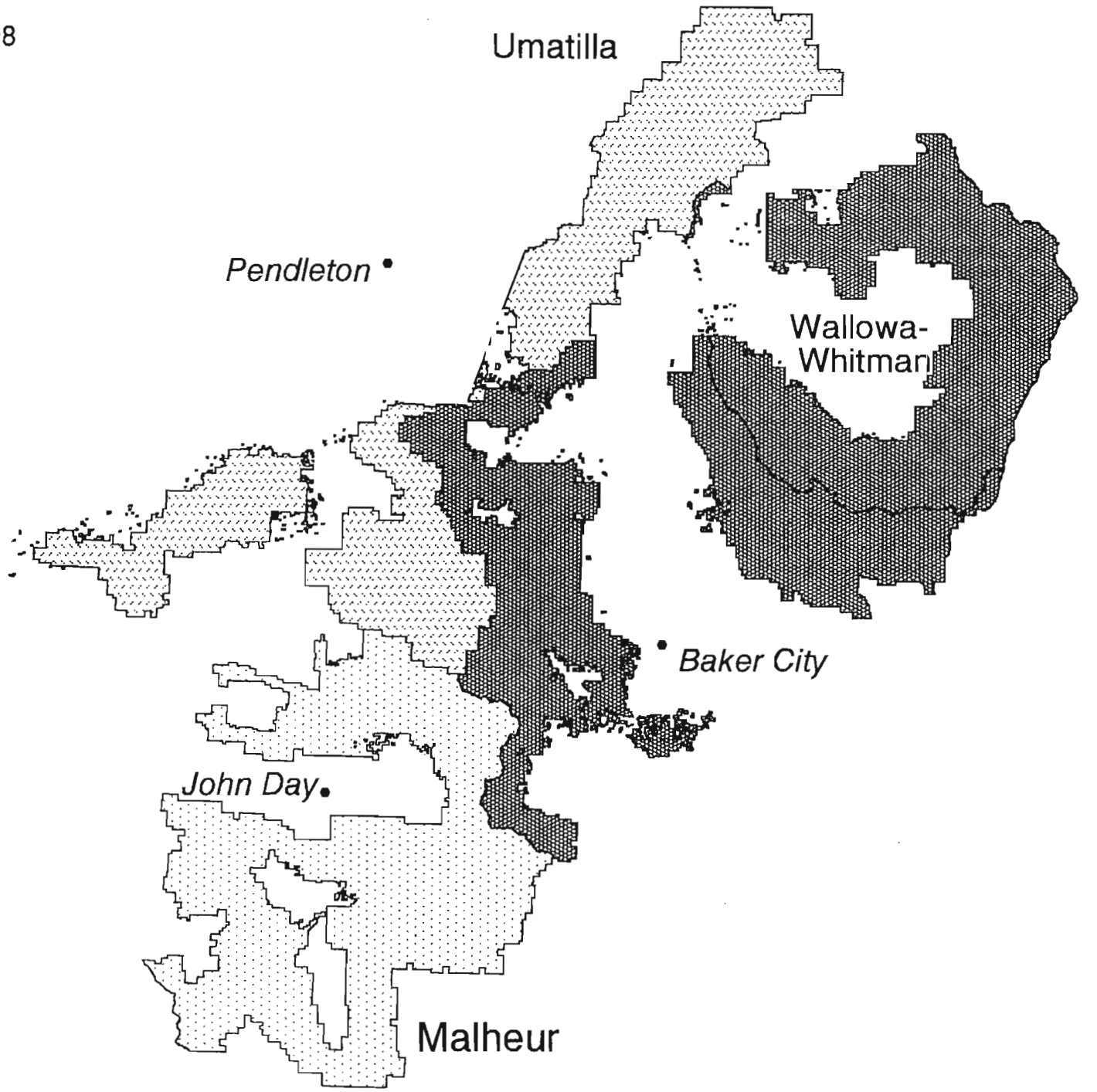
Region

1997 Monitoring & Evaluation Report for the National Forests of the Blue Mountains

Malheur, Umatilla, and Wallowa-Whitman National Forests

1998



SECTION 1:

INTRODUCTION

1997 MONITORING REPORT
for the
BLUE MOUNTAINS OF NORTHEASTERN OREGON

SECTION 1 - INTRODUCTION

This FY 97 Monitoring and Evaluation Report documents the monitoring results for the three Blue Mountain Forests - the Malheur, Umatilla, and Wallowa-Whitman. This is the first year the three Forests have combined their monitoring information into one report.

The Forest Plans for the National Forests in the Blue Mountains were approved by the Regional Forester in 1990. The Forest Plans provide direction for integrated management of the resources on the three forests, and the Plans are implemented through projects designed to be consistent with that direction. Monitoring is integral to the correct and consistent implementation of the Forest Plans. Additionally, it is necessary to test the validity of the Plans themselves. Where monitoring shows a need for change, or when changes in law and regulation occur, Forest Plans may need to be amended.

Why Combine the Monitoring Efforts for the three Forests?

After several years of discussion, the Malheur, Umatilla, and Wallowa-Whitman National Forests began a tri-Forest monitoring program for the Blue Mountains in 1997. The coordinated monitoring program was necessary for several reasons:

- Current monitoring questions and protocols vary widely among the Forests, so the monitoring results cannot be meaningfully aggregated to provide Blue Mountain or other subregional information. Under ecosystem management, monitoring needs to occur on a broader, landscape scale.
- The number of required monitoring items has increased (PACFISH, INFISH, Rescission Bill sales, etc), and the requirements are likely to increase further when the Interior Columbia Basin Ecosystem Management Project (ICBEMP) is completed.
- The three Forests share common publics and issues, and the Forests should be responding with similar monitoring objectives and methodology.
- Some monitoring can be done more systematically on fewer sites across a larger area, thereby reducing redundancies and costs.
- Monitoring will be the key to adaptive management under ICBEMP.

The Forests anticipate that it will take 3 to 4 years to fully coordinate and standardize the monitoring program. Fiscal Year 97 coordination efforts focused on standardizing the reporting format for items that the Forests have been reporting similarly for many years, including range planning, timber outputs, and social/economic parameters. The Forests also fielded tri-Forest interdisciplinary monitoring teams to review Rescission Bill Salvage Sales for Forest Plan compliance (results are summarized in Section 2).

Organization of this Report

This monitoring and evaluation report is composed of five primary sections. Sections 2 through 5 each has its own Table of Contents.

Section 1: Introduction (this section).

Section 2: Coordinated/Consolidated Monitoring Items which the three Forests reported in generally the same manner.

Section 3: Malheur National Forest monitoring items done independently of the other Blue Mountain Forests in FY 97.

Section 4: Umatilla National Forest monitoring items done independently of the other Blue Mountain Forests in FY 97.

Section 5: Wallowa-Whitman National Forest monitoring items done independently of the other Blue Mountain Forests in FY 97.

SECTION 2:

COMBINED/COORDINATED MONITORING
for the
NATIONAL FORESTS OF THE BLUE MOUNTAINS
(Malheur, Umatilla, Wallowa-Whitman)

Blue Mountain Forests' Monitoring Report - FY 97
Section 2 - Combined/Coordinated Monitoring Items

TABLE OF CONTENTS

LIST OF TABLES

MONITORING ITEM: FORAGE UTILIZATION
(Monitoring Items: Malheur 21, Umatilla 10, Wallowa-Whitman 13)

Question: *Are actual forage utilization levels within established Forest Plan utilization standards in riparian and/or upland areas as appropriate, particularly within those pastures identified as high priority for resource reasons?*

Forest Plan utilization standards are being incorporated into the Annual Operating Plans for each allotment on each Forest. On the Umatilla and Wallowa-Whitman Forests, these standards include modifications to comply with Endangered Species Act mitigation for listed fish species. The Malheur did not have any listed fish species in FY 97. Utilization standards can vary by Forest and allotment.

Table II-1
UTILIZATION MONITORING BY FOREST - FY 97

	MALHEUR	UMATILLA	WALLOWA-WHITMAN*
Total number of pastures within active allotments	414	129	505
Total number of pastures monitored	289	85	226
Percent of total pastures monitored	70%	63%	45%
Total number of monitoring data collections	396	586	652
Total number of these within riparian areas	339	384	497
Number of monitored pastures meeting standards	243	68	204
Percent of monitored pastures meeting standards	84%	84%	90%
Number of monitored pastures exceeding standards	38	10	13
Percent of monitored pastures exceeding standards	13%	12%	6%
Number of monitored pastures uncertain	8	3	9
Percent of monitored pastures uncertain	3%	4%	4%

* Note: A pasture grazed more than once during the year may be reported as two pastures. A pasture within an active allotment , which is scheduled for rest, is considered to be an active pasture.

Some pastures are not receiving adequate utilization monitoring, particularly the lower priority allotments or pastures. This situation is a direct result of insufficient funding in the range program.

The Threshold of Variability was exceeded on the Umatilla Forest, which calls for no more than 10% of the allotments monitored having utilization by animal species exceeding requirements by more than 5% (average use on key areas with a pasture).

Recommended Action:

- Continue to emphasize utilization monitoring as funding and priorities permit. Permittees will be required to assist in monitoring.
- Continue to emphasize effectiveness monitoring to validate utilization standards with special emphasis on riparian areas.

MONITORING ITEM: ALLOTMENT MANAGEMENT PLANNING
(Monitoring Items: Malheur 19, Umatilla 38, Wallowa-Whitman 16)

Question: Are Range Analyses, AMP-level NEPA decisions, and Allotment Management Plans (AMPs) being completed according to the Forest Plans' schedules as revised by the 1995 Rescission Bill?

The Forest Plans developed schedules to emphasize allotment management planning on the high resource priority allotments. The 1995 Rescission Bill (Public Law 104-19) required the Forests to develop a new schedule to complete all AMP NEPA within a 15-year timeframe. All three Forests are currently behind schedule.

Table II-2
STATUS OF RANGE AMPs AND EAs BY FOREST

	MALHEUR	UMATILLA	WALLOWA-WHITMAN
Number of Range Inventory and Analyses completed in FY 97	none	none	none
Number of NEPA decisions completed in FY 97	none	none	none
Number of allotments covered by these decisions	n/a	n/a	n/a
Number of AMPs completed in FY 97	none	1*	4*
Number of allotments covered by these AMPs	n/a	1	4
Cumulative number of AMPs that are Forest Plan sufficient	7	3	24
Number of Active Allotments	98	34	120
Percent of Active Allotments with AMPs that are Forest Plan sufficient.	7%	9%	20%

** NEPA completed in previous years*

Funding in the range program did not allow any new range inventory or NEPA decisions in 1997. On the Umatilla, three AMPs remain in progress, and work is beginning on eight others. A total of 20 other allotments on the Wallowa-Whitman are in various stages of planning; one allotment has a NEPA decision and awaits approval of its AMP, and five allotments await completion of NEPA documents dependent on funding. Accomplishments tend to vary widely by District.

According to the schedule developed in response to the Rescission Bill, approximately 30% of the Malheur's should be under new (since the Forest Plan) AMPs; this is significantly higher than the 7% completed to date.

Although results show some progress in analysis and planning, significant changes in program emphasis combined with extreme reductions in funding continue to cause overall accomplishments to remain low. Large increases in appeals and litigation continue to result in delays and cost increases for all decisions. The threshold of variability was exceeded on the Umatilla and Wallowa-Whitman National Forests.

Recommended Actions:

- Continue to update the Allotment Management Planning Schedule to reflect the requirements of the Rescission Bill as well as the actual budgets and accomplishments.
- Continue to pursue adequate funding to accomplish allotment management planning in a timely manner.
- Initiate larger-scale analysis for multiple allotments, providing greater efficiencies and accomplishments.

MONITORING ITEM: NOXIOUS WEEDS
(Monitoring Items: Malheur 22, Umatilla 12, Wallowa-Whitman 17)

Questions: *Are noxious weeds being inventoried and managed in accordance with the Regional FEIS for Competing and Unwanted Vegetation, Forest Plan direction, and applicable NEPA decisions? Are treatments effective at meeting objectives defined in the NEPA decisions and/or in associated treatment plans? What are the trends in noxious weed populations?*

Both the Umatilla and Wallowa-Whitman Forests have approved Noxious Weed EAs. These EAs incorporated provisions from the Region 6 FEIS for Managing Competing and Unwanted Vegetation, its Mediated Agreement, and the Forest Plans. The Umatilla's EA was prepared in 1995, and the Forest is currently working on an EA covering inventoried and predicted noxious weed sites. The Wallowa-Whitman completed its programmatic Noxious Weed EA and Integrated Management Plan in 1992, and in 1994 it completed an update to this decision to incorporate additional inventoried sites. The Wallowa-Whitman has been working on an updated EA to incorporate newly-inventoried sites since 1996, but the update has been delayed due to a lack of funding and the complexities arising from consultation under the Endangered Species Act (ESA). The Malheur began the NEPA process for a Forest-wide EA in 1997; it is expected to be completed in FY 98. In the meantime, some districts on the Malheur have approved Categorical Exclusions for limited noxious weed treatment, primarily manual treatment.

All three Blue Mountain Forests treated noxious weed infestations this year, and inventoried new sites as well. New sites probably represent some increased spread of weeds, as well as older sites that have only recently been inventoried. Table II-3 summarizes the existing inventory for the three forests and the type of noxious weed treatment conducted in FY 97. The Table is incomplete because the Forests are still in the process of developing a common data base and reporting in the same fashion; results should be reported more consistently in the future.

Table II-3
NOXIOUS WEEDS - INVENTORY AND TREATMENT
Malheur, Umatilla, and Wallowa-Whitman National Forests

	Gross or Net Acres*	MALHEUR	UMATILLA	WALLOWA-WHITMAN
Total acres of inventoried noxious weeds	Gross	-	18,932	9,639
	Net	380	7,468	-
Acres newly-inventoried in FY 97	Gross	-	-	5,668
	Net	110	-	-
Acres currently NEPA-approved for treatment	Gross	-	4,341	3,989
	Net	-	4,341	3,989

-- Table continued on next page --

Table II-3 - cont.

	Gross or Net Acres*	MALHEUR	UMATILLA	WALLOWA-WHITMAN
METHODS OF TREATMENT Manual	Gross Net	198 -	2,846 2,255	368 -
Mechanical	Gross Net	0 -	0 0	0 -
Biological **	Gross Net	9 -	0 0	0 -
Cultural	Gross Net	0 -	350 350	0 -
Chemical	Gross Net	0 -	1,145 264	839 -
TOTAL	Gross Net	207 -	4,341 2,869	1,207 -

* *Gross acres are the total acres considered to be "infested". Within the gross acres, the net acres are the land base actually occupied by noxious weeds. For example, a 10-acre (gross) infestation may be occupied by widely-scattered individuals that occupy only 5% (0.5 net acres) of the area.*

** *Biological controls released in past years are not reflected here, even though biological agents may still be active and providing on-going treatment.*

While not reflected in the above table, which is based upon acres, the Umatilla has 773 noxious weed sites that are currently being treating under its 1995 Noxious Weed EA.

TREATMENT EFFECTIVENESS:
Informal monitoring on the Malheur indicates that manual control of noxious weeds has not been very effective, while informal monitoring on the Wallowa-Whitman indicates that where herbicides are used, control rates are high. However, with substantial seed in the ground, and with the seed capable of sustaining viability over many years, each site will need to be treated and monitored for many years if objectives are to be achieved.

The Umatilla has done some more intensive monitoring of its treated noxious weed sites. The following table has a description of the number of sites, acres monitored and identified population response to treatment (increasing, stable, decreasing) by method of treatment (manual, chemical, etc.).

Table II-4
NOXIOUS WEED TREATMENTS AND TRENDS - FY '97
Umatilla NF

Treatment Category	Acres Monitored	Trends
Biological (82 sites)	696	general increase
Chemical (305 sites)	1,145	10% increase; 69% decrease; 21% stable
Manual (15 sites)	1,374	15% increase; 55% decrease; 30% stable
Cultural (rx fire) (2 sites)	350	first year data

Prescribed fire was employed to reduce seed set and spread rates of 350 acres of yellow starthistle; monitoring results are not yet available.

NOXIOUS WEED TRENDS:
It is difficult to accurately determine trends in noxious weeds populations. While more infestations are reported each year, it is generally unknown whether these are new sites or simply established sites that have only recently been found and reported. However, the Noxious Weed Coordinators for the Forests have professional opinions on weed trends; these are discussed below.

On the Malheur Forest, noxious weeds are spreading. Many new sites (or newly-found sites) are showing up along roads, particularly knapweed and dalmation toadflax. Previously-inventoried sites are also increasing in acreage. For the most part, manual control efforts of the past years have been ineffective at eliminating sites or keeping them from spreading. A couple new species have been identified that have a high probability of spreading to the Forest without aggressive control efforts. These are purple loosestrife, currently in limited areas of the John Day Valley, and leafy spurge, which is present in Fox Valley.

On three of the four Umatilla districts (Heppner, North Fork John Day, and Pomeroy), the noxious weed populations are approaching "stable" levels although new sites are constantly being found, particularly along transportation corridors. On the Walla Walla District, the noxious weed population exhibits an increase. Noxious weed populations are dynamic, particularly at the adjacent private land interface. In general, the spread direction is from adjacent private lands onto the Forest (puncture vine, jointed goatgrass, medusahead, and yellow starthistle). However, in two areas evidence exists of spread of noxious weeds (yellow starthistle and tansy ragwort) from the Forest to adjacent lands.

Also on the Umatilla Forest, the sizes and numbers of populations of Canada thistle, diffuse knapweed, St. John's wort, and yellow starthistle appear to be increasing. Four new invader species - Russian knapweed, jointed goatgrass, Scotch broom, and medusahead - have been reported in the post-environmental assessment period (1995-1997). Yellow toadflax has increased on Heppner and North Fork John Day Districts.

The Wallowa-Whitman also reports that many of its noxious weed infestations appear to be moving onto the National Forest from adjacent lands. Species that seem to be increasing include yellow starthistle, knapweeds, rush skeleton weed, leafy spurge, purple loosestrife, and white top.

Recommended Actions:

- Complete the noxious weed EA on the Malheur.
- Update the noxious weed EAs and action plans on the Umatilla and Wallowa-Whitman NFs so that weeds can be more effectively treated.
- Continue an assertive prevention, inventory, treatment and monitoring program for noxious weeds.
- Continue work on the tri-Forest noxious weed data base.
- Begin work on an aerial spraying EIS for the Umatilla and Wallowa-Whitman.

MONITORING ITEM: INSECTS AND DISEASE
(Monitoring Items: Malheur 29, Umatilla 21, Wallowa-Whitman 3)

Questions: What are the current levels and trends of key insects and diseases on the Forests? Are destructive insects and diseases remaining below potentially damaging levels following management activities?

The annual aerial insect detection survey flights conducted cooperatively by the Pacific Northwest Region of the Forest Service and the States of Oregon and Washington provide data on the extent of insect infestations on all lands covered by the survey flights. Acres infested by key insects on National Forest Lands and mapped during the 1997 survey flights are shown in Table II-5. Most forest diseases are not identified by aerial observers, so there is no annual tabulation of incidence or severity. Most data on Forest diseases comes from stand exams and personal observations by silviculture staff and pest management specialists. Risk-rating models can be used to estimate expected disease incidence based on more identifiable stand attributes.

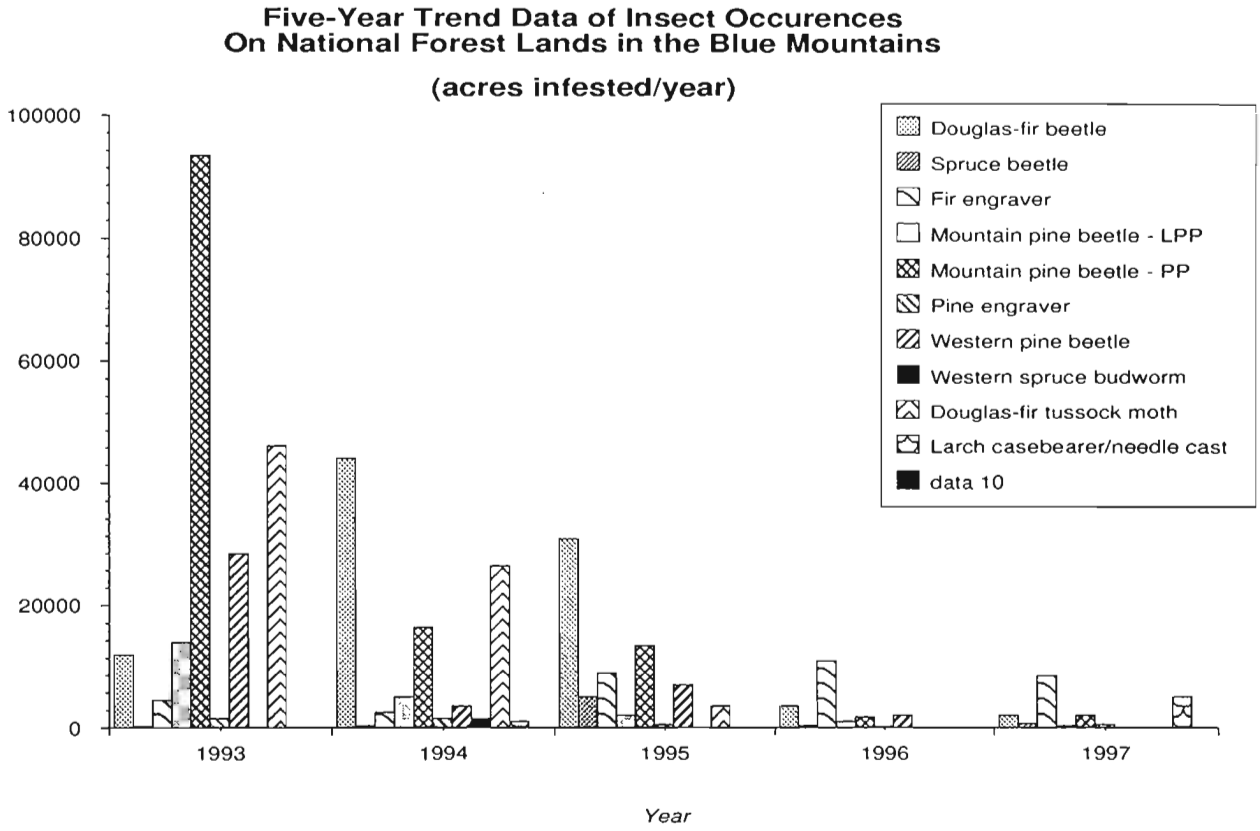
Table II-5
FOREST SERVICE ACRES OBSERVED INFESTED BY KEY INSECTS IN 1997
(AERIAL INSECT DETECTION SURVEY)
Malheur, Umatilla, and Wallowa-Whitman National Forests

Key Insect	Malheur NF	Umatilla NF	Wallowa-Whitman NF
Douglas-fir beetle	216	1189	480
Spruce beetle	149	55	208
Fir engraver	1498	4676	1854
Mountain pine beetle, lodgepole pine	0	268	16
Mountain pine beetle, ponderosa pine (PP)	949	488	579
Mountain pine beetle, western white pine	0	0	0
Mountain pine beetle, whitebark pine	0	0	0
Pine engraver	507	67	43
Western pine beetle	73	31	30
Western pine beetle, pole-size PP	0	0	0
Western spruce budworm	0	0	9
Douglas-fir tussock moth	0	0	0
Larch casebearer/larch needle cast	790	2908	775

NOTE: Not all acres were equally infested by insects.

Current population levels of most key insects in the Blue Mountains Province are relatively low. Collapse of recent tussock moth and budworm outbreaks and return of near normal precipitation rates have helped reverse the trend of increased bark beetle populations related to weakened tree condition in most areas. Recovery of photosynthetic capacity and photosynthate levels in trees severely defoliated by budworms and tussock moths have been slow, but many trees are refoliating and will likely survive. Fir engraver levels that continue to remain high are

sometimes associated with root diseases that have become more active in stands with budworm-weakened host trees. The infestation trends of selected insects are shown below.



The five-year trend of most insects in the Blue Mountains has been downward. Larch casebearer has appeared in some areas in the last two seasons, causing only spotty, mostly light, defoliation of some larches.

Insect and disease evaluations of projects indicate that management activities are not aggravating insects and diseases, and in fact may be reducing the susceptibility of stands to insects and diseases in many cases through stocking level control and increasing seral species component in treated stands. Most tree diseases increase with tree age and proportion of hosts in the stand. Since shade-tolerant species are susceptible to a high proportion of diseases, many unmanaged stands are experiencing a gradual increase in disease activity. These same stands also increase in susceptibility or vulnerability to insects with time. The trend towards unevenage management could increase root disease, defoliators, bark beetles, and dwarf mistletoes above the their historic levels.

Recommended Action:
Continue to monitor.

MONITORING ITEM: HARVEST METHODS AND ACRES
(Monitoring Items: Malheur 26, Umatilla 13, Wallowa-Whitman 5)
(MAL 26, UMA 13, WAW 5)

Questions: *How do the silvicultural harvest methods implemented on the ground compare to the predictions from the Forest Plan? Is clearcut acreage going down as per the Chief's 1992 direction to reduce clearcutting by 25%?*

The following table displays the silvicultural harvest methods implemented on the ground compared to Forest Plan projections.

Table II-6
SILVICULTURAL HARVEST METHODS (IN ACRES) FOR FY 97
Malheur, Umatilla, and Wallowa-Whitman Forests

SILVICULTURAL METHOD	MALHEUR	UMATILLA	WALLOWA-WHITMAN
Clearcut			
Forest Plan Estimate (acres/year)	3,330	4,000	4,300
Actual FY 97 Harvest (acres)	220	419	0
Percentage (actual/planned)	7%	11%	0%
Shelterwood/Seed Tree			
Forest Plan Estimate	5,084	2,600	8,500
Actual FY 97 Harvest	1,654	1,429	2,749
Percent (actual/planned)	33%	55%	32%
Overwood Removal			
Forest Plan Estimate	6,301	1,500	1,200
Actual FY 97 Harvest	25	33	568
Percent (actual/planned)	<1%	2%	47%
Uneven-age/Selection			
Forest Plan Estimate	6,424	900	6,500
Actual FY 97 Harvest	2,423	643	1,310
Percent (actual/planned)	38%	71%	20%
Commercial Thinning			
Forest Plan Estimate	6,778	100	3,900
Actual FY 97 Harvest	4,012	228	5,163
Percent (actual/planned)	59%	228%	132%
Salvage/Sanitation			
Forest Plan Estimate	3,956	0	0
Actual FY 97 Harvest	3,676	3,250	8,639
Percent (actual/planned)	93%	NA	NA
Special Cut			
Forest Plan Estimate	0	0	0
Actual FY 97 Harvest	72	0	0
Percent (actual/planned)	NA	NA	NA
TOTAL			
Forest Plan Estimate	**31,873**	**9,100**	**24,400**
Actual FY 97 Harvest	**12,082**	**6,002**	**18,429**
Percent (actual/planned)	**38%**	**66%**	**76%**

Total harvest acres and most individual treatment methods were well below all three Forest Plan projections. This is due, in part, to new direction provided by Regional Forester's Amendment 2. Both the Umatilla and Wallowa-Whitman exceeded the threshold of variability (there is no threshold on the Malheur).

In recent years, prescriptions have generally been shifting away from clear cutting, with an increased proportion shifting to shelterwood and seed tree harvest methods on the Umatilla and shifting towards unevenage management and commercial thinning on the Malheur and Wallowa-Whitman. The shift away from clearcutting is due to changes in management direction which include increased emphasis on restoration and reduced timber harvests.

Table II-7 displays the trend in clearcut acres for the three Forests since 1992. In 1992, the Chief of the Forest Service announced that the amount of clearcut acres would be reduced on National Forest lands by 25 percent based on 1988 levels. Since this announcement, the Forests have been reducing the number of clearcut acres. In the short term, additional insect and fire salvage may keep the clearcut acreage relatively high. The long-term projection indicates the amount of clearcut harvest will continue to decline.

Table II-7
CLEARCUT ACRES - FISCAL YEARS 1992-97
Malheur, Umatilla, and Wallowa-Whitman National Forests

YEAR	MALHEUR	UMATILLA	WALLOWA-WHITMAN
1988 Base		3,299	
Forest Plan Projection	3,330	4,000	3,900
1992	4,340	3,119	not available*
1993	3,095	1,470	700
1994	972	195	286
1995	992	109	80
1996	265	895	4
1997	220	419	0

* Monitoring Reports for Fiscal Years 1991 through 1996 displayed acres offered for sale. The Report this year display actual acres harvested. The table begins with 1993 as older sales designed prior to implementing the Forest Plan were harvested in 1991 and 1992. 1993 reflects the first year of fully implementing the Forest Plan.

Appropriate definitions for harvest types in large fire areas with high mortality need further review by Blue Mountain Forests silviculturists and managers. Most treatments in large fires are called salvage, but such harvests do not meet classic salvage definitions. These harvest areas appear to be clearcuts when completed, but they do not meet the current forestry definition for clearcut.

Silvicultural harvest methods continue to vary substantially from Forest Plan projections. The Forests expect differences to remain until the Plan is adjusted, sometime after completion of the ICBEMP.

Recommended Action:
Continue implementing the Regional Forester's Amendment 2 until the Interior Columbia Basin Ecosystem Management Project (ICBEMP) is completed. Results from ICBEMP can be expected to change management emphasis regarding harvest methods and levels during a future Forest Plan adjustment.

MONITORING ITEM: REFORESTATION
(Monitoring Items: Malheur 24/25, Umatilla 15, Wallowa-Whitman 8)

Questions: How many acres were reforested this year using natural and artificial regeneration practices? Are acres being satisfactorily restocked within five years of final harvest as per NFMA?

Table II-8 shows acres of reforestation accomplished by treatment method as compared to assumptions made in the Forest Plans.

Table II-8
REFORESTATION ACCOMPLISHMENT (IN ACRES) FOR FY97
Malheur, Umatilla, and Wallowa-Whitman Forests

	MALHEUR		UMATILLA		WALLOWA-WHITMAN	
Activity	Forest Plan Avg/Year	FY 97 Accomplish-ment	Forest Plan Avg/Year	FY 97 Accomplish-ment	Forest Plan Avg/Year	FY 97 Accomplish-ment
Site Prep for Natural Regeneration	7,212	1,008	Not Available*	559	1,700	646
Natural Regeneration without Site Prep	0	10	3,100*	4,299	8,000	3,134
Artificial Regeneration (Planting)	5,460	8,636	4,400	3,423	4,800	3,506

** The Umatilla Forest Plan does not differentiate between natural regeneration catgories (with and without site preparation).*

First year survival for planted seedlings on the three Forests was 89% for the Malheur, 93% for the Umatilla, and 88% for the Wallowa-Whitman Forest.

On the Malheur National Forest, planting continues to be the major method of regenerating forests. The Forest Plan placed a slightly higher emphasis on natural regeneration, but due to wildfires and past forest health problems, planting is used to ensure adequate reforestation within an acceptable timeframe.

Recent trends for planting and natural regeneration vary from Umatilla's Forest Plan projections (planting is lower and natural regeneration is higher). Changes are anticipated as the lodgepole certification program decreases and the recent insect mortality and large fires areas are reforested. First and third year survival increased substantially from 1996; however, third year survival is still a major Forest-wide problem. Additional information on the Umatilla's reforestation program may be found in Section 4, Monitoring Item 15.

On the Wallowa-Whitman, first year survival back in 1995 was 86%. Today, the 1997 Plantation Survival and Growth Report shows third year survival on the same units has dropped to 50%, a significant and cumulative effect of the prolonged hot and dry summer of the 1996 growing season, as well as continued mortality from gophers, livestock and big-game, vegetative competition, and seedling problems.

An area is stocked to a satisfactory level when trees per acre meet the minimum or greater standards defined in the silvicultural prescription. Units are supposed to be satisfactorily restocked within five years of final harvest. Tables II-9, II-10, and II-11 show stocking status on acres harvested 5-7 years ago for each of the three Forests.

Table II-9
STATUS OF REFORESTATION AFTER FINAL HARVEST
Malheur National Forest

Year of Harvest	Revised Final Harvest Acres	Adequately Stocked		Not Adequately Stocked		Not Adequately Stocked - No Further Treatment	
		Acres	%	Acres	%	Acres	%
1990	8,345	7,809	94%	505	6%	31	<1%
1991	13,927	13,053	94%	874	6%	0	NA
1992	12,399	11,039	89%	1,300	10%	60	<1%

(Source: Annual Reforestation and Timber Stand Improvement Accomplishment Report, Table 22.)

On the Malheur, acres reported as "not adequately stocked" at the end of FY97 occurred primarily on the Burns Ranger District. The District reported that the inadequate stocking was due to delays in sale closures and site preparation, as well as failure to conduct stocking level exams to verify stocking levels.

Table II-10
STATUS OF REFORESTATION AFTER FINAL HARVEST
Umatilla National Forest

Year of Harvest	Revised Final Harvest Acres	Adequately Stocked		Not Adequately Stocked		Not Adequately Stocked - No Further Treatment	
		Acres	%	Acres	%	Acres	%
1990	8,080	7,251	90%	742	11%	87	1%
1991	9,754	9,176	94%	556	6%	22	<1%
1992	10,368	8,619	83%	1,749	17%	0	NA

(Source: Annual Reforestation and Timber Stand Improvement Accomplishment Report, Table 22.)

On the Umatilla, all but 109 acres are anticipated to be adequately stocked after additional treatments (replanting, fill-in planting, etc.).

Table II-11
STATUS OF REFORESTATION AFTER FINAL HARVEST
Wallowa-Whitman National Forest

Year of Harvest	Revised Final Harvest Acres	Adequately Stocked		Not Adequately Stocked		Not Adequately Stocked - No Further Treatment	
		Acres	%	Acres	%	Acres	%
1990	24,844	21,610	87%	3,213	13%	21	<1%
1991	12,264	9,784	78%	2,7969	22%	71	<1%
1992	7,457	4,988	67%	2,469	33%	0	NA

(Source: Annual Reforestation and Timber Stand Improvement Accomplishment Report, Table 22.)

On the Wallowa-Whitman, many of the acres considered not adequately stocked are associated with wildfire areas of the mid-to-late 1980s. Many of the areas burned over by wildfires, and then subsequently salvaged, were planted to grass seed as part of the planned rehabilitation efforts. The resultant thick sod of grass adversely affected the survival of planted seedlings. These areas may need up to 20 years to adequately restock themselves naturally. Since some of these areas would not have been harvested had the wildfires not occurred, the Forest Service cannot justify attempting to reforest them every year.

Recommended Action:

- The Malheur Forest Silviculturist and Reforestation Specialist will conduct a reforestation review of the Burns Ranger District to assess what actions need to be taken to achieve compliance with the NFMA five-year standard.
- The Umatilla Forest will continue review of long-term reforestation survival on the Forest.
- The Forests need to re-examine some of the assumptions in the Forest Plans related to total anticipated acres of reforestation through the remaining portion of the decade. With the adoption of an ecosystem management approach, there is a new trend toward less regeneration harvest and a resulting downward trend in reforestation.

MONITORING ITEM: TIMBER OFFERED FOR SALE
(Monitoring Items: Malheur 27, Umatilla 43, Wallowa-Whitman 4)

Questions: *Are the Forests offering the ASQ and TPSQ estimated in the Forest Plans? Of the offered volume in the Fiscal Year, how much was actually awarded? How many sales and how much volume received no bids, and what were the reasons for no bids?*

Table II-12
TIMBER VOLUME OFFERED
Malheur National Forest

	VOLUME OFFERED FOR SALE			
	MMBF		MMCF	
FISCAL YEAR	ASQ	TPSQ	ASQ	TPSQ
1991	not readily available	202	not readily available	39
1992	not readily available	102	not readily available	20
1993	66	72	13	14
1994	26	33	5	6
1995	65	67	13	13
1996	80	81	15	16
1997	38	39	7	8
Forest Plan Projected Output	200	211	35	38

Of the 39 MMBF offered by Malheur National Forest in FY97, about 7 MMBF (4 sales) had no bids. Purchasers attributed this primarily to small utilization standards and small diameter material. One sale was simply an expensive sale to log.

Table II-13
TIMBER VOLUME OFFERED
Umatilla National Forest

	VOLUME OFFERED FOR SALE			
	MMBF		MMCF	
FISCAL YEAR	ASQ	TPSQ	ASQ	TPSQ
1994	1	9	<1	2
1995	5	22	1	4
1996	19	45	4	8
1997	37	82	7	15
Forest Plan Projected Output	124	159	22	28

On the Umatilla Forest, about 48 percent of the TSPQ and 29 percent of the ASQ was offered for bid in FY 97. Only 1.5 MM of the timber offered received no bids. The sale was designed to remove timber so a new ski run could be constructed at the Ski Bluewood Ski Area. Because of the logging requirements, including helicopter logging, purchasers thought it would be uneconomical to operate.

Timber offered for sale during FY 97 was made up almost entirely of salvage volume. The Forest still has potential salvage from the large-scale insect damage and mortality of the early 1990s, but opportunities are declining as the dead material deteriorates. Salvage efforts continue on several large fires that burned in 1996. The Wheeler Point Salvage Sale was sold in December, 1996, and it has been completed. Timber killed in the Tower, Bull and Summit Fires on the North Fork John Day Ranger District is expected to be sold in FY '98 and FY '99.

Table II-14
TIMBER VOLUME OFFERED
Wallowa-Whitman National Forest

	VOLUME OFFERED FOR SALE			
	MMBF		MMCF	
FISCAL YEAR	ASQ	TPSQ	ASQ	TPSQ
1991	33	53	Not readily available for this report	
1992	66	79		
1993	8	23		
1994	17	29		
1995	39	54		
1996	44	53		
1997	40	49		
Forest Plan Projected Output	141	205		

On the Wallowa-Whitman Forest, four sales were delayed due to consultation under the Endangered Species Act. One sale was 53 days late in being returned to the Forest; this delay prohibited the completion of the sale package in time to offer in FY97.

Of the 40 MMBF offered by the Wallowa-Whitman during FY 97, 30 MMBF was awarded by September 30, 1997. Another 6.9 MMBF was awarded after that date. Two sales, totaling 3.1 MMBF, were offered but received no bids. One was a resale of the Washington Watershed, partially located in the Baker City Municipal Watershed, which required helicopter yarding of low-value material. This project was subsequently selected by the Washington Office for inclusion in a pilot program. The other was a sale with low harvest volume per acre. The District re-evaluated the project and is redesigning it.

All three Forests: Since FY 93, the annual volume targets assigned by the Regional Office have been considerably less than the TPSQs and the ASQs. They have been based on what the Forests feel they can produce under the newer standards of PACFISH, INFISH, and Regional Forester's Amendment 2.

Recommended Actions:

- Continue implementing the Regional Forester's Forest Plan Amendment 2 (Interim Approach for Sale Preparation) until the Interior Columbia Basin Ecosystem Management Project (ICBEMP) is completed. Results from the ICBEMP can be expected to be a driver of change to the timber harvest levels. Forest Plan adjustments to ASQ and TPSQ are expected upon completion of ICBEMP process.
- Work on updating vegetation databases in preparation of upcoming Forest plan adjustment or revision.

MONITORING ITEM: ANNUAL PROGRAMS AND BUDGETS

Monitoring Items: Malheur 37, Umatilla 58, Wallowa-Whitman 45

Question: *Are the annual Forest budgets adequate to implement the programs and activities identified in the Forest Plans?*

Table II-15 on the next page displays the projected budget levels from the Forest Plans in terms of 1997 dollars compared to the FY 97 budget and the percentage change by budget item.

For the Malheur National Forest, the overall budget was 28% less than the projected level. The budget items showing the greatest change were forestland vegetation (+199%), general purpose roads (+116%), and timber salvage sales (+201%).

For the Umatilla National Forest, the overall budget was 32% less than the projected level. The budget items showing the greatest change were law enforcement (+326%), timber salvage sales (+105%), and timber purchaser elect roads (-99%).

For the Wallowa-Whitman National Forest, the overall budget was 14% less than the projected level. The budget items showing the greatest change were timber salvage sales (+2019%), ecosystem planning (+196%), and recreation and other facilities construction (+115%).

Because of inconsistencies in the budget process from year to year, the comparison of individual budget allocations to projected budgets does not necessarily provide a meaningful understanding of where the Forest Plan projections were overestimated or underestimated. The comparison of total budgets, however, does provide a general illustration of a Forest's ability to implement programs and activities identified in the Forest Plan. The Malheur (-28%) and the Umatilla (-32%) National Forests' FY 97 budgets are above the 20% threshold of variability. The Wallowa-Whitman National Forest (-14%) budget is approaching the threshold.

Recommended Action:
Continue to update County economic models and evaluate updated budget information in support of the Forest Plan adjustment process. The adjustment process is currently on hold until the ICBEMP and FEIS are completed.

Table II-15
ANNUAL BUDGETS (1997$)
Blue Mountain National Forests

Program Area	MALHEUR Projected	MALHEUR Actual	% Change	UMATILLA Projected	UMATILLA Actual	% Change	W-W Projected	W-W Actual	% Change
Anadromous/Inland Fish	402,558	164,000	-59%	495,945	399,800	-19%	590,640	516,000	-13%
Ecosystem Planning	722,937	580,000	-20%	0	1,113,300	N/A	346,680	1,025,370	196%
Facility Maintenance	216,762	114,000	-47%	279,270	155,000	-44%	380,385	350,430	-8%
Forestland Vegetation	762,240	2,279,000	199%	1,730,190	1,891,000	9%	2,603,310	2,839,170	9%
Heritage Resources	133,392	79,000	-41%	123,585	65,000	-47%	237,540	108,080	-55%
General Administration	1,155,270	794,000	-31%	2,982,090	695,350	-77%	4,346,340	1,766,900	-59%
Land Ownership	322,761	107,000	-67%	115,560	47,970	-58%	247,170	315,720	28%
Land Line Location	270,357	56,000	-79%	203,835	57,000	-72%	457,425	100,220	-78%
Law Enforcement	396,603	59,000	-85%	22,470	95,660	326%	93,090	64,430	-31%
Minerals & Geology	213,189	52,000	-76%	200,625	73,000	-64%	186,180	393,890	112%
NFS Supplemental Disaster	0	74,600	N/A	0	76,400	N/A	0	858,100	N/A
NFS Emergency Supplemental	0	0	N/A	0	554,000	N/A	0	37,300	N/A
Range Management	969,474	536,000	-45%	455,820	201,080	-56%	1,117,080	478,160	-57%
Rangeland Vegetation Mangmt.	0	0	N/A	0	33,600	N/A	0	36,500	N/A
Recreation	747,948	275,353	-63%	1,917,975	429,990	-78%	1,858,590	1,268,000	-32%
Road Maintenance	1,599,513	745,000	-53%	1,458,945	583,770	-60%	1,372,275	1,159,380	-16%
Soil, Water, Air	443,052	83,560	-81%	385,200	75,840	-80%	428,535	122,160	-71%
Soil and Water Improvements	0	259,111	N/A	0	118,100	N/A	0	309,500	N/A
T&E Species Operations	142,920	77,000	-46%	59,385	93,370	57%	0	115,950	N/A
Timber Sale Mangmt.	6,863,733	954,000	-86%	4,567,830	1,229,230	-73%	4,026,945	1,167,060	-71%
Wilderness	95,280	72,650	-24%	0	208,400	N/A	0	408,300	N/A
Wildlife Habitat Mngt.	296,559	110,000	-63%	574,590	129,280	-78%	0	207,450	N/A
TOTAL NFS:	**15,754,548**	**7,471,274**	**-53%**	**15,573,315**	**8,326,140**	**-47%**	**18,292,185**	**13,648,070**	**-25%**
Disaster Construction	0	177,900	N/A	0	349,000	N/A	0	919,300	N/A
Emergency Construction	0	0	N/A	0	571,500	N/A	0	539,200	N/A
General Purpose Roads	15,483	33,464	116%	3,100,860	79,000	-97%	4,808,580	106,240	-98%
Recreation & Other Facilities	2,276,001	288,000	-87%	715,830	20,000	-97%	126,795	272,000	115%
Recreation Road Construction	402,558	206,731	N/A	0	97,000	N/A	0	114,720	N/A
Timber Road Construction	5,061,750	709,890	N/A	0	662,333	N/A	0	884,340	N/A
Trail Construction	128,628	75,000	-42%	667,680	48,000	-93%	160,500	309,700	93%
TOTAL CONSTRUCTION:	**7,884,420**	**1,490,985**	**-81%**	**4,484,370**	**1,826,833**	**-59%**	**5,095,875**	**3,145,500**	**-38%**
Brush Disposal	1,012,350	696,000	-31%	1,197,330	408,000	-66%	457,425	119,650	-74%
Cooperative work K-V	8,376,303	6,766,000	-19%	3,699,525	3,576,000	-3%	2,393,055	3,196,400	34%
Cooperative work other	1,248,168	443,000	-65%	884,355	649,000	-27%	608,295	293,820	-52%
Federal Highway Admin.	0	71,000	N/A	0	1,098,360	N/A	0	583,410	N/A
Land Acquisition	0	6,800	N/A	0	1,000	N/A	93,090	69,640	N/A
Quarters Maintenance	0	80,000	N/A	0	61,000	N/A	0	69,260	N/A
Range Betterment	89,325	47,000	-47%	41,730	23,000	-45%	130,005	63,480	-51%
Restoration of Improvements	0	0	N/A	0	2,000	N/A	0	2,150	N/A
State and Private Forestry	0	15,000	N/A	22,470	42,040	87%	0	235,640	N/A
Timber Purchaser Elect Roads	0	0	N/A	3,909,780	48,870	-99%	5,781,210	0	-100%
Timber Salvage Sales	2,515,392	7,571,000	201%	1,905,135	3,906,000	105%	211,860	4,489,190	2019%
Wildland Fire Presuppression	1,700,748	3,261,000	92%	1,510,305	2,464,630	63%	2,701,215	4,389,240	62%
Wildland Fire Suppression	0	289,663	N/A	0	0	N/A	0	238,190	N/A
Working Capital Fund	0	54,000	N/A	0	60,000	N/A	0	349,720	N/A
TOTAL OTHER FUNDS:	**15,768,840**	**19,300,463**	**22%**	**13,170,630**	**12,339,900**	**-6%**	**12,376,155**	**14,099,790**	**14%**
GRAND TOTAL:	**39,407,808**	**28,262,722**	**-28%**	**33,228,315**	**22,492,873**	**-32%**	**35,764,215**	**30,893,360**	**-14%**

MONITORING ITEM: COSTS AND VALUES
Monitoring Items: Malheur 38, Umatilla 59, Wallowa-Whitman 46

Question: Are projected major costs and values used in the Forest Plans approximating actual implementation costs and values?

Priced and non-priced benefits were used in the economic efficiency analysis to calculate the present net value for each Forest Plan. The major priced benefits included market and non-market values. Market values constitute the unit price of an output normally exchanged in a market after at least one stage of production, and are expressed in terms of what people are willing to pay as evidenced by a market transaction. Timber and forage are examples of priced outputs.

Non-market values constitute the unit price of an output not normally exchanged in a market at any stage before consumption and must be computed from other economic information in terms of what people would be willing to pay rather than go without the output. Anadromous sport fishing and dispersed recreation are examples of non-market values.

Non-priced benefits are those which have no available market transaction evidence and no reasonable basis for estimating a dollar value comparable to market values associated with priced benefits. Examples of non-priced benefits in the Forest Plans include ecosystem diversity, visual quality, water quality, and air quality. These values were considered qualitatively rather than quantitatively. Refer to the FEIS, Appendix B, of each Forest Plan for further discussion.

The primary priced benefits (market and non-market) in the Forest Plans included timber, range, recreation, fish, and wildlife. The following table displays the projected timber commodity costs and values for each Forest from the Forest Plan in terms of 1997 dollars compared to the FY 97 actual costs and values and the percentage change by each item.

Table II-16
ANNUAL COSTS AND REVENUES (1997$)
Blue Mountain National Forests

	MALHEUR			UMATILLA			WALLOWA-WHITMAN		
	Projected	Actual	% Change	Projected	Actual	% Change	Projected	Actual	% Change
Harvest mbf	211,000[1]	18,445	-91%	159,000[1]	10,576	-93%	185,000[2]	10,388	-94%
Timber Revenue	37,577,000	5,272,885	-86%	29,063,340	2,192,081	-92%	25,680,000	2,593,442	-90%
Timber Costs	16,197,600	5,308,062	-67%	9,933,345	1,896,328	-81%	8,230,440	2,137,264	-74%
$ revenue/mbf	178	286	61%	183	207	13%	139	250	80%
$ cost/mbf	77	288	275%	62	179	187%	53	206	290%

[1] Based on TPSQ (Total Program Sale Quantity) from Forest Plans.
[2] Includes sawtimber and roundwood annual harvest totals for the first decade.

All three Forests showed great increases in unit values and unit costs per thousand board feet over what was projected by the Forest Plans. This situation has occurred even though the volume of timber harvested by the three forests has declined over 90% since the Forest Plans were implemented, reflecting the significant increase in the value of timber and the cost of producing timber for the forests.

Range outputs were valued in terms of animal unit months in the Forest Plans. In terms of 1997 dollars, the regional base forage value of an AUM in Region 6 in 1983 was $8. The 1997 regional base forage value for an AUM in Region 6 is $6.22, or 22% lower than the value used for forest planning purposes.

Recreation, wildlife, and fish values used in Forest Planning were derived from the Resources Planning Act Program, 1985-2030, October 1986. Values were updated in 1990 and are currently under review by the Washington Office. Previous comparisons of the change in values were completed in the FY 94-96 monitoring reports. An additional comparison of these values will be completed in future monitoring reports when the updated values become available.

The cost and values for timber and range exceed the 20% threshold of variability for all three Forests. The comparison of 1985 to 1990 values for recreation, wildlife, and fish illustrated in the FY 94-96 monitoring reports indicates that these values exceed the threshold of 20% for the majority of the activities.

Recommended Action:
Continue to evaluate updated cost and value information in support of the Forest Plan adjustment process. The adjustment process is currently on hold until the ICBEMP and FEIS are completed.

MONITORING ITEM: PAYMENTS TO COUNTIES

Monitoring Items: Malheur 41, Umatilla 55, Wallowa-Whitman 47

Question: Are payments to counties approximately as projected in the Forest Plans?

Table II-17 on the next page displays the Forest Plans' projected payments to counties in terms of 1997 dollars compared to the FY 97 payments and the percentage change by county.

For the Malheur National Forest, the total payments to counties were 78% less than the projected level. For the Umatilla National Forest, the total payments to counties were 69% less than the projected level. For the Wallowa-Whitman National Forest, the total payments to counties were 90% (Wallowa) and 76% (Whitman) less than the projected level.

All counties within the influence of the Blue Mountains National Forests have been experiencing declines in payments to counties. Over 90% of the payments are disbursed to counties in Oregon. The largest decline in individual county payments for FY 97 compared to Forest Plan projections occurred in Idaho and Nez Perce counties (-90%) in Idaho, Wallowa and Malheur counties (-86%) in Oregon, and Asotin and Garfield (-70%) in Washington.

The change in payment to counties exceeds the threshold of variability for all three forests.

Recommended Action:
Continue to evaluate updated payments to counties information in support of the Forest Plan adjustment process. The adjustment process is currently on hold until the ICBEMP and FEIS are completed.

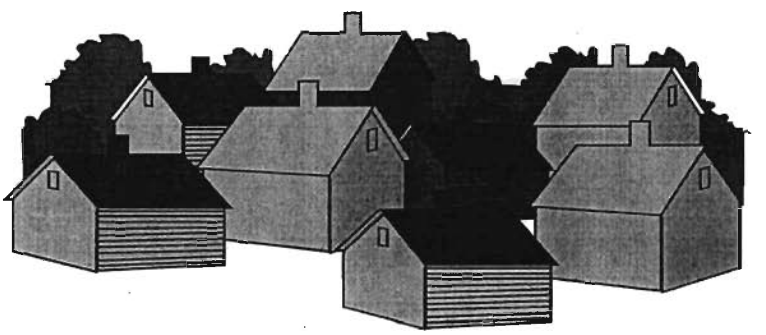


Table II-17

ANNUAL PAYMENTS TO COUNTIES (1997$)

Blue Mountain National Forests

	MALHEUR			UMATILLA			WALLOWA			WHITMAN			TOTAL		
County	Projected	Actual	% Change	Projected	Actual	% Change	Projected	Actual	% Change	Projected	Actual	% Change	Projected	Actual	% Change
IDAHO:															
Idaho			0%			0%	5,045	486	-90%			0%	5,045	486	-90%
Nez Perce			0%			0%	4,452	451	-90%			0%	4,452	451	-90%
Subtotal:	0.00	0.00	0%	0.00	0.00	0%	9,497	937	-90%	0.00	0.00	0%	9,497	937	-90%
OREGON::															
Baker	284,085	65,364	-77%		5	0%			0%	1,888,250	459,740	-76%	2,172,335	525,109	-76%
Grant	7,291,515	1,603,578	-78%	1,765,497	546,257	-69%			0%	255,701	62,724	-75%	9,312,712	2,212,559	-76%
Harney	1,893,900	$422,198	-78%			0%			0%			0%	1,893,900	422,198	-78%
Malheur	3,788	$855	-77%			0%			0%	19,669	$2,425	-88%	23,457	3,280	-86%
Morrow			0%	802,503	$252,615	-69%			0%			0%	802,503	252,615	-69%
Umatilla			0%	2,166,753	$662,221	-69%			0%	78,677	$19,767	-75%	2,245,430	681,988	-70%
Union			0%	561,747	$180,276	-68%	23,741	$2,282	-90%	1,573,542	$385,285	-76%	2,159,030	567,843	-74%
Wallowa			0%	722,253	$217,791	-70%	2,937,969	$287,941	-90%	118,016	$31,137	-74%	3,778,237	536,869	-86%
Wheeler			0%	240,748	$71,126	-70%			0%			0%	240,748	71,126	-70%
Subtotal:	9,473,288	2,091,995	-78%	6,259,502	1,930,291	-69%	2,961,710	290,223	-90%	3,933,855	961,078	-76%	22,628,354	5,273,587	-77%
WASHINGTON:															
Asotin			0%	320,998	$94,832	-70%			0%			0%	320,998	94,832	-70%
Columbia			0%	882,753	$281,163	-68%			0%			0%	882,753	281,163	-68%
Garfield			0%	561,747	$168,287	-70%			0%			0%	561,747	168,287	-70%
Walla Walla			0%	7,985	$4,289	-46%			0%			0%	7,985	4,289	-46%
Subtotal:	0		0%	1,773,483	548,571	-69%	0		0%	0		0%	1,773,483	548,571	-69%
TOTAL:	9,473,288	2,091,995	-78%	8,032,985	2,478,862	-69%	2,971,206	291,160	-90%	3,933,855	961,078	-76%	24,411,334	5,823,095	-76%

MONITORING ITEM: EMPLOYMENT AND INCOME

Monitoring Items: Malheur 39, Umatilla 54, Wallowa-Whitman 47

Question: Are forest-related employment and income approximately as projected in the Forest Plans?

Tables II-18 and II-19 display the projected employment and income for each Forest in terms of 1997 dollars compared to FY 97 employment and income and the percentage change.

Table II-18
ANNUAL EMPLOYMENT (1997)
Blue Mountain National Forests

	MALHEUR			UMATILLA			WALLOWA-WHITMAN		
ACTIVITY	Projected	Actual	% Change	Projected	Actual	% Change	Projected	Actual	% Change
Sawtimber	1,513	370	-76%	882	428	-51%	894	379	-58%
Other Timber	0	51	N/A	285	74	-74%	179	57	-68%
Livestock	55	50	-9%	17	16	-8%	93	79	-15%
Recreation	NA	NA	NA	2,759	2,393	-13%	1,807	2,400	33%
TOTAL	**5,568**	**471**	**-70%**	**3,943**	**2,911**	**-26%**	**2,973**	**2,916**	**-2%**

Table II-19
ANNUAL PERSONAL INCOME (1997$)
Blue Mountain National Forests

	MALHEUR			UMATILLA			WALLOWA-WHITMAN		
	Projected	Actual	% Change	Projected	Actual	% Change	Projected	Actual	% Change
Sawtimber MM$	80.6	10.3	-87%	32.9	12.0	-64%	27.0	10.6	-61%
Other Timber MM$	0.0	1.4	N/A	9.3	2.0	-78%	5.8	1.6	-73%
Livestock MM$	1.4	1.3	-9%	0.3	0.3	-22%	1.8	1.4	-20%
Recreation MM$	NA	NA	NA	42.9	38.4	-10%	35.8	48.5	36%
TOTAL MM$	**82.0**	**13.0**	**-84%**	**85.4**	**52.6**	**-38%**	**70.3**	**62.1**	**-12%**

Employment and income associated with timber harvesting experienced the largest decreases for all three forests (over 50% declines) and exceed the thresholds of variability. Changes associated with domestic livestock grazing were primarily within the 20% threshold. Recreation effects were not included in the Malheur National Forest planning process. Effects associated with recreation are within the threshold of variability on the Umatilla National Forest, and above for the Wallowa-Whitman National Forest. Total employment and income effects exceed the threshold of variability for the Malheur and Umatilla National Forests. Changes are within the threshold for the Wallowa-Whitman National Forest primarily due to increases in estimates of recreation use.

Recommended Action:
Continue to evaluate timber harvesting, range, and recreation outputs and employment and income information in support of the Forest Plan adjustment process. The adjustment process is currently on hold until the ICBEMP and FEIS are completed.

MONITORING ITEM: LIFESTYLES, ATTITUDES, AND BELIEFS

Monitoring Items: Malheur none, Umatilla 56, Wallowa-Whitman 47

Question: What changes are occurring in local lifestyles, attitudes, and beliefs?

Evaluation of this question is currently on hold until the ICBEMP and FEIS are completed. Information and reports released by the project provide the most current information available to address these issues.

Recommended Action:
Continue to evaluate information as it becomes available in preparation for the Forest Plan adjustment process. The adjustment process is currently on hold until the ICBEMP and FEIS are completed.

SPECIAL FOCUS ITEM: RESCISSION SALES

BACKGROUND:

In July of 1995, the President signed the Rescission Act (Public Law 104-19) which contained provisions for an emergency salvage timber sale program. According to the Memorandum of Agreement on Timber Salvage Related Activities under Public Law 104-19, agencies were to "monitor and evaluate salvage sale objectives and mitigation requirements as an integral part of salvage sales and the salvage program as prescribed by Forest Plans, Land Use Plans, and agency direction."

An Interagency Program Review, dated October 8, 1996, found that the Forest Service had not fulfilled many of its monitoring obligations under the Rescission Bill. In response, the National Forests of the Blue Mountains decided to focus 1997 interdisciplinary field reviews on rescission sale implementation.

In addition, the Region is currently operating under two interim aquatic management strategies: PACFISH, for stream systems providing habitat for anadromous fish species, and INFISH, for stream systems providing only resident fish habitat. The Blue Mountain Forests felt that the rescission sale review provided an opportunity to monitor implementation of PACFISH and INFISH standards.

PROJECT SELECTION and MONITORING PROCESS:

Rescission Sales were randomly selected for review from a list of completely or partially logged rescission sales as of the spring of 1997. The majority of rescission sales were fairly small, so the sample was stratified to include at least one large sale (> 1 MMBF) per Forest. In cases of extremely small or isolated sales, minor adjustments were made to the sampling strategy. A total of 16 rescission sales were reviewed, as reflected in Tables II-20 and II-21.

Table II-20
BREAKDOWN OF RESCISSION SALES BY FOREST
Blue Mountain National Forests

	MALHEUR		UMATILLA		WALLOWA-WHITMAN	
	PACFISH	INFISH	PACFISH	INFISH	PACFISH	INFISH
Total Rescission Sales	23	9	38	0	19	12
Rescission Sales completely or partially-logged by spring 1997	16	7	24	0	17	7
Number of Rescission sales monitored by Tri-Forest Interdisciplinary Teams	5	1	6	0	2	2

Table II-21
RESCISSION SALES MONITORED BY TRI-FOREST TEAMS
Blue Mountain National Forests

SALE	FOREST	DISTRICT	PACFISH or INFISH?	VOLUME
Vat	Malheur	Bear Valley	INFISH	774 MBF
SFD SSTS	Malheur	Bear Valley	PACFISH	441 MBF
Thin Bear	Malheur	Long Creek	PACFISH	435 MBF
Morning	Malheur	Long Creek	PACFISH	1345 MBF
Genesis Blowdown	Malheur	Prairie City	PACFISH	430 MBF
Angel II	Malheur	Prairie City	PACFISH	90 MBF
Ridge Salvage	Umatilla	Heppner	PACFISH	690 MBF
53 Roadside Salvage	Umatilla	Heppner	PACFISH	1993 MBF
Twice	Umatilla	Walla Walla	PACFISH	420 MBF
63-64 Danger Salvage	Umatilla	Walla Walla	PACFISH	330 MBF
Tarweed Salvage	Umatilla	NF John Day	PACFISH	6183 MBF
Liver SSTS	Umatilla	NF John Day	PACFISH	375 MBF
Red Pine Salvage	W-W	Pine	INFISH	28 MBF
Little Eagle	W-W	Pine	INFISH	1766 MBF
Mac	W-W	La Grande	PACFISH	~1765 MBF
Biomass	W-W	Wallowa Valley	PACFISH	~8800 MBF

Monitoring Teams consisted of four to seven people, with at least one representative from each Forest. Most Teams included a wildlife biologist, silviculturist, fire/fuels specialist, and either a hydrologist or fish biologist. The larger teams included other resource specialists, such as engineers, ecologists, or landscape architects. Both District and Forest-level people participated on these teams.

The Monitoring Teams focused on monitoring of design features and mitigation measures identified in the rescission sale NEPA documents, particularly those related to soil and water protection; this also helped fulfill some of the monitoring requirements under PACFISH and INFISH. While the teams focused on implementation monitoring, they also made note of the apparent effectiveness of the designs and mitigations.

SUMMARY OF FINDINGS:

While each sale had its own unique issues and findings, certain themes recurred across a number of sales. These are summarized in the individual subsections below. Detailed information on each individual review may be obtained from the Malheur National Forest Headquarters in John Day, Oregon.

Meeting the Rescission Sale Definitions:

All of the sales reviewed met the rescission sale definition in place at the time the sale was sold. Some sales were relatively "green" but at-risk to insect infestations; these were either sold before Secretary Glickman's updated salvage definition of July 1996, or were evaluated by the Zone Entomologist and classified as "imminently susceptible to insects within 3 years," per Glickman's direction.

Snags and Down Woody Debris:

Down woody requirements are generally being met or exceeded. Snag requirements are being met on sales with a high percentage of mortality. However, most of the greener sales did not meet snag requirements following harvest. In many cases, pre-existing conditions were not known, and we don't know whether the stand met the snag requirements for numbers and size prior to harvest. Districts and Forests are not consistent in the way snag deficiencies are address. Some feel that snag creation is a necessary mitigation for the sale, while others feel it is a pre-existing condition that the sale itself is not compelled to correct. This should be addressed in the next round of Forest Planning.

Water Quality Mitigations and Best Management Practices:

All the sales were planned to meet or exceed PACFISH or INFISH default Riparian Habitat Conservation Area (RHCA) widths; none of the sales identified a need to enter RHCAs to benefit riparian resources. Some of the RHCAs could have benefited from some sort of treatment, particularly in areas of heavy mortality, where stands were not currently meeting desired condition and were unlikely to in the future without active management.

While none of the sales had been planned to enter or modify RHCA boundaries, the reviews found a number of cases where harvest and/or skidding occurred within RHCAs. In a couple of instances, the streamcourse had not been identified during planning or layout. In most cases, the stream had been addressed during planning, but the buffers had not been applied during layout and/or implementation. At times, the unit was taken to a "logical boundary", a road for example, which was located within the RHCA. Other times, springs or streams requiring protection were not identified on the Sale Area Map, making it more difficult to effectively administer the contract.

Although some RHCAs were incorrectly entered, few of the occurrences had any adverse effects on aquatic or riparian values. The most impactive were three cases of old landings that were used within RHCAs. While PACFISH and INFISH allow the re-use of old landings where necessary, they should be relocated out of RHCAs where skidding patterns and topography allow. Better options existed in two of the three cases.

Safety and PACFISH RHCA requirements were in conflict in one hazard tree sale. PACFISH and the EA called for falling and leaving all hazard trees within the RHCA. However, in some cases, heavy debris would have been left right above a culvert, which could have negatively impacted Riparian Objectives if the culvert had clogged with debris. The District chose to remove the material. The monitoring team agreed that this action made good sense, although it did not technically meet PACFISH requirements.

More information on soil and water BMPs may be found in the individual Forest sections.

Soil Best Management Practices:

The soil resource was protected during implementation of the reviewed sales. The use of designated skidtrails, as well as oversnow logging in many cases, appeared to keep detrimental impacts below the Forests' thresholds of 20%. Processors also did well at protecting the soil. One sale had some soil damage when warm weather caused equipment to break through the snow, but the District shut the operation down when this occurred.

One area that could be improved is the erosion control on skidtrails. Required seeding or subsoiling was not completed in some instances. Many waterbars were ineffective due to excessive distance between them or inadequate runout, and others were overbuilt.

Silviculture:

The silvicultural prescriptions all appeared appropriate for the stands given current management direction. A few of the written prescriptions did not fulfill the requirements of the silviculture handbook.

An apparent conflict exists among current management direction. For example, Regional Forester's Amendment 2 ("Interim Direction") did not change Forest Plan Desired Future Conditions (DFCs). Yet the standards from the Interim Direction may preclude the Forest from reaching DFC on General Forest ground, where (according to Forest Plan DFCs) younger seral species should be emphasized for timber yield. The Interim Direction frequently necessitates leaving late and old stands, which are usually comprised of late seral species.

Roads:

The Districts are doing a good job at reconstructing roads to allow for adequate drainage. With one exception, culverts were well-located during reconstruction, and Districts are trying to increase culvert size to accommodate 100-year flood events as per standards in PACFISH and INFISH. Districts may want to consider rolling drain dips rather than culverts on their lower-maintenance roads.

One road was "obliterated" without removing existing culverts.

NEPA Documentation and Tracking Changes:

The Districts all showed good awareness of management direction and sensitivity for resource management, but documentation could be improved. Changes were occasionally made during layout and administration with little or no documented rationale for the change. The decisions generally appeared to be sound, but the Forest Service wasn't doing what it said it would do in the NEPA document.

Some of the NEPA documents were quite general, making exact on-the-ground plans difficult to determine. While this approach provides management flexibility, specific management direction may be overlooked. This may have contributed to some of the RHCA concerns discussed above. Categorical Exclusions, in particular, seem to be very general in nature, with critical design features and mitigation measures relegated to the analysis file.

Overall, the Districts showed a good understanding of and sensitivity to resource values. Most of the sale units appeared to be appropriately implemented, but room for improvement is evident, particularly in the area of RHCAs.

Recommended Actions:

- The three Forest NEPA coordinators will develop a process for providing NEPA oversight and improving NEPA skills on the Forests, particularly regarding Categorical Exclusions and changes/corrections.
- The three Forest NEPA coordinators will begin to meet at least yearly to improve NEPA consistency among the Forests.
- Districts need to work with their respective Forest NEPA coordinators on a case-by-case basis when they feel that they are dealing with conflicts between Interim Direction and Forest Plan goals and DFCs.

SECTION 3:

MALHEUR NATIONAL FOREST

Blue Mountain Forests' Monitoring Report - FY 97
Section 3 - Malheur National Forest

TABLE OF CONTENTS

LIST OF TABLES

MONITORING ITEMS NOT REPORTED FOR FY97

A few Monitoring Items from the Malheur Forest's 1995 Monitoring and Evaluation Plan were not reported in FY 97. Some items only need to be reported every few years in order to detect trends. Other items were purposely deferred pending updated monitoring protocols or direction, and some were deferred due to lack of funding.

Monitoring Items that were not reported for any of the above reasons discussed above include the following:

Item 2	Dispersed Recreation Sites
Item 4	Semi-Primitive Recreation Setting
Item 5	Off-Highway Vehicle Use
Item 9	Visual Resources
Item 12	Dead and Defective Tree Habitat
Item 13	Big Game Habitat
Item 14	Old Growth Habitat
Item 23	Timber Suitability
Item 35	Administrative Facilities

The Summary Of Recommended Actions, beginning on page 3-3, shows all Malheur Monitoring Items and whether they were deferred, consolidated with the other Blue Mountain Forests (Section 2 of this Monitoring Report), or reported in this Section.

NOTE: Even when a Monitoring Item is reported, it may not be addressing all the Monitoring Questions from the 1995 Monitoring Plan.

SUMMARY OF FINDINGS AND ACTIONS TO BE TAKEN

The table on the following pages summarizes for the Malheur Forest the key findings and the recommended actions to be taken as a result of this year's monitoring. A more complete discussion of each monitoring item may be found later in this section or in the Coordinated Monitoring Section (Sec. 2).

It is assumed that monitoring will be continued with all monitoring items in the future, although not all will be reported every year. Three other categories of action are identified in the table as follows:

Change Practices (CP) - Indicates that the results of current practices are outside the thresholds of variability and/or are not meeting specific direction set by the Forest Plan. A change in practice or procedure may be needed.

Further Evaluation (FE) - Indicates that results may or may not have exceeded the threshold of variability, but additional information or evaluation is needed to better identify the cause of the concern and/or determine future actions.

Amend Forest Plan (AP) - Indicates that results are inconsistent with the Forest Plan, or the Forest Plan direction was not clear. The Forest Plan may need changing or clarifying through the amendment or revision process.

Summary of Recommended Action

♦ 1997 **Monitoring Report** ♦

Malheur National Forest

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
MAL	1	Developed Recreation	CM	X			Public seems generally satisfied with the Forest's recreation facilities. Begin user fees at selected campgrounds in FY 98.
DEF	2	Dispersed Recreation	NE				Deferred for FY 97.
MAL	3	Trail System	CM				Less than 30% of trails maintained to standard due to funding shortage.
DEF	4	Semi-Primitive Recreation Setting	NE				Deferred for FY 97.
DEF	5	Off-Highway Vehicle Use	NE				Deferred for FY 97.
MAL	6	Wilderness	CM				Most wilderness objectives are being met, with occassional violations during hunting season. Need to complete the Levels of Acceptable Change.
MAL	7	Wild and Scenic Rivers	CM	X			Most Wild and Scenic characteristics and standards are being met, except for high water temperatures and range utilization in select locations.
MAL	8	Cultural and Historic Site Protection	CM				29 out of 232 monitored sites were damaged; eighteen of these were by wildfire.
DEF	9	Visual Resources	NE				Deferred for FY 97.
MAL	10/-11	Resident and Anadromous Fish Habitat	CM				Best Management Ptractices generally being implemented and standards generally being met, with some exceptions. Existing stream data needs to be cleaned up and utilized.
DEF	12	Dead and Defective Tree Habitat	CP/FE				Deferred for FY 97.
DEF	13	Big Game Habitat	FE				Deferred for FY97.
DEF	14	Old Growth Habitat	CP/FE				Deferred for FY97.
MAL	15	Threatened, Endangered, and Sensitive Species	CP/FE		X		Limited implementation monitoring occured.
MAL	16	Raptor nests	FE		X		Goshawk nesting areas are being protected per Regional Forester's Amendment #2. Limited implementation monitoring of other species occurred.

REPORT SECTION:
DEF - Deferred by Management this FY
MAL - Reported in this Malheur Section
COORD - Reported with Coordinated Monitoring (Section 2)

RECOMMENDED ACTION:
CM - Continue Monitoring
CP - Change Practices
NE - Not evaluated in FY96
FE - Further Evaluation Needed
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
COORD	19	Range Allotment Status	NE		X		No AMPs or range NEPA documents were completed on the Forest in FY 97. The Forest is significantly behind the schedule established for the Rescission Bill.
Accomp Report	20	Range Improvements	NE				Reported in Accomplishments Table III-10.
COORD & Accomp Report	21	Range AUMs, Utilization, and Condition	CM				84% of the monitored pastures met standards; the Forest is currently funded only to monitor priority pastures. Need to emphasize efectiveness monitoring for utilization standards in riparian areas.
COORD & MAL	22	Managing Competing and Unwanted Vegetation	CM				The Forest treated over 200 acres this year, primarily thru manual means. Noxious weeds are addressed under coordinated section (Sec. 2). Other elements of competing and unwanted veg were not reported in FY97.
DEF	23	Timber Suitability	NE				Deferred for FY 97.
COORD	24	Silvicultural Practices	NE				First year survival was 89%.
COORD	25	Reforestation	NE		X		Some acres remain inadequately restocked after 5 years. Most problems are on the Burns RD; Forest silviculturists will conduct a reforestation review in FY 98.
COORD	26	Timber Harvest	NE		X	X	Timber harvest acres remain well below Forest Plan projections, with silvicultural methods shifting towards unevenage management and commercial thinning. A Forest Plan adjustment will be needed following completion of ICBEMP.
COORD	27	Timber Offered	NE		X	X	Timber offered remains well below Forest Plan projections. Outputs will need to be re-evaluated after the completion of ICBEMP.
COORD	29	Insects and Disease	NE				Insect levels have dropped dramatically in recent years. Continue to monitor.
MAL	30	Water Resources	CP/FE	X	X		Most stream analyzed did not meet temperature standards. BMP implemenation fairly good, but could improve on stream buffers, use of Sale Area Maps, and effectiveness of waterbars.

REPORT SECTION:
DEF - Deferred by Management this FY
MAL - Reported in this Malheur Section
COORD - Reported with Coordinated Monitoring (Section 2)

RECOMMENDED ACTION:
CM - Continue Monitoring
CP - Change Practices
NE - Not evaluated in FY96
FE - Further Evaluation Needed
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
MAL	31	Air Quality	CM				Prescribed burning met Forest Plan Standards, but the emissions cap for NE Oregon was reached in December '97.
MAL	32	Soils Resources	CP	X			Pre-designated skidtrails generally kept adverse impacts below 20%. Skidtrail rehab could be improved.
MAL	33	Minerals	CM				Minerals operations, including rehabilitation, are generally meeting standards.
MAL	34	Road Mileage and Open Road Density	CM				Road construction, reconstruction, and maintenance remain below Forest Plan Projections. Open road densities meet standards except in Silvies watershed.
DEF	35	Administrative Facilities	NE				Deferred for FY 97.
MAL	36	Fire	CM				1997 was a mild fire season. Natural fuels treatment continued to increase.
COORD	37	Program Budgets, Expenditures, and Accomplishments	CM		X	X	The FY 97 budget was 28% less than projected in the Forest Plan.
COORD	38	Costs and Values	CM/ AP		X	X	Timber unit costs and unit values have increasd dramatically over Forest Plan predictions, although timber harvest has declined. Range values are 22% less than the Forest Plan. Recreation, fish, and wildlife values have not changed since 1990.
COORD	39	Local Income	FE		X	X	Personal income is down 84% from predictions in the Forest Plan
COORD	40	Local Employment	FE		X	X	Annual employment is down 70% from Forest Plan projections.
COORD	41	Payments to Counties	FE		X	X	Payments to counties are down 78% from the outputs predicted in the Forest Plan.

REPORT SECTION:
DEF - Deferred by Management this FY
MAL - Reported in this Malheur Section
COORD - Reported with Coordinated Monitoring (Section 2)

RECOMMENDED ACTION:
CM - Continue Monitoring
CP - Change Practices
NE - Not evaluated in FY96
FE - Further Evaluation Needed
AP - Amend Forest Plan

MALHEUR MONITORING ITEM 1
Developed Recreation

Questions: Are existing developed recreation facilities accommodating recreation demand?
Are developed recreation facilities meeting customer expectations and desires?

Existing facilities are meeting current recreation demand. There were 20 campgrounds provided for in the Forest Plan, and 19 were available for use in FY 97. Beech Creek Campground was closed a few years ago due to a very high number of hazard trees. It is unlikely that it will be opened in the future because of low demand. Also, removing all the hazard trees would probably result in a small clear-cut, which would not be appealing to campers.

Informal use surveys were conducted at campgrounds periodically during the late spring, summer, and early fall months. The surveys showed occupancy rate of 71% at the most popular campgrounds, which are Magone Lake, Strawberry, and Big Creek. The other campgrounds showed an occupancy rate of approximately 43%.

Based on the data collected, it appears the existing campground facilities are accommodating recreation demand, but some are approaching their capacity if the figures are correct. The use figures need to be verified for next year as they appear to be high. The Forest will put together a team to look at recreation figures on the Forest this spring.

Most customer expectations are being met. Sampling methods for this item included informal discussions with developed recreation site users and responses to comment sheets posted on bulletin boards. Prairie City, Burns, and Long Creek Districts also used customer service questionnaire cards.

Most comments were positive for the operation and maintenance of the campgrounds on the Malheur National Forest. Compliments were received on the following items:

- Clean toilets
- The Remtec toilet
- No fees
- A good campground host
- Campgrounds
- The level of improvements
- The handy location of some of our campgrounds
- Mountain bike trails and nearby trails
- The beautiful natural setting of several campgrounds
- Shelter from the wind
- Fewer cattle around two campgrounds
- Wildlife

However, complaints were received on the following:

- The toilets in one campground smelled
- Toilets are located too far away from some camp sites or from a trailhead
- Toilets are not very accessible
- Not enough tent spaces at one campground
- Not enough or no drinking water; water pump at one campground is too difficult to use
- More water sources needed at picnic area and beach
- Horse facilities are not maintained or are only suitable for one user
- Heavy cattle use around a campground exclosure
- The poor quality of the access road to one campground

Some negative comments received that are somewhat outside the Forest's ability to correct were as follows:

- Magone lake beach is too crowded.
- Low water levels due to drought, subsurface leaks and leaking dams in lakes adjacent to two campgrounds.
- Poor water quality (high levels of plant growth) at one lake (pond) due to low water levels.
- Accessible fishing facilities being useless when the water level is too low.

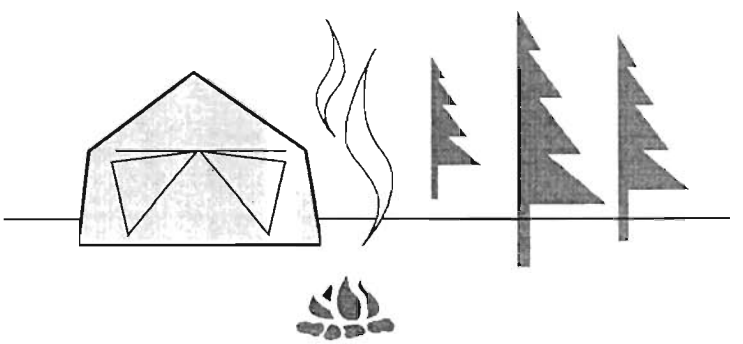
Some campers suggested a need for toilets that are more accessible for older users. There was a request for an additional toilet at one campground. More drive-thru trailer sites and larger parking sites for RVs and trailers were repeated suggestions. A need for more parking in the day-use area of one campground with a popular trailhead was also identified by recreation users, especially for numerous trailers and RVs. Others mentioned a desire for a large group site in two campgrounds, including room for hunters with wall tents. There is a demand for more campsites in Little Crane Creek Campground during hunting season.

Generally, the public seems satisfied with the management and maintenance of recreation facilities on the Forest. Low funding levels for recreation management continues to limit the Forest's ability to make some of the improvements desired by recreating visitors, and limits ability to do thorough use surveys and customer surveys. However, even without adequate customer surveys, the Forest recognizes the need to make improvements in management and maintenance as funding allows. At low funding levels, the priority is to correct public safety hazards, rather than investing in large-scale facility improvements.

The Forest will be replacing approximately 20 toilets over the next year, and charging fees at some of the campgrounds under the Fee Demo program. This will allow the Forest to maintain 80% of the collections on the Forest to upgrade facilities.

Recommended Actions:

- Have a Team review Forest recreation figures in the spring of 1998.
- Improve the campground operation and maintenance by using fees collected to upgrade and maintain our campgrounds.
- Continue to monitor.



MALHEUR MONITORING ITEM 3
Trail System

Question: How many miles of trail were maintained, constructed, and reconstructed for each type of trail that exists on the Forest?

Approximately 614 miles of trails were maintained on the Forest in FY 97:

Table III-1
TRAIL MAINTENANCE
Malheur National Forest

TYPE OF TRAIL	TOTAL MILES OF TRAIL	MILES MAINTAINED in FY97
Wilderness trails	129.3	103.9
All-purpose trails (hiking, horse, mtn biking, and motorized use)	46.9	28.2
Non-motorized trails	79.9	77.6
Foot-only trails (non-wilderness)	5.2	2.5
Barrier-free trails (handicapped accessible)	2.5	2.5
Mountain bike trails	223.1	203.4
Snowmobile trails	502.5	195.5
Cross-country ski	8.0	0
TOTALS	997.4	613.6

About 89% of the summer trails were maintained. Because of the reporting methodology, the Forest did not distinguish if they were maintained to standard or not to standard. Only 39% of the winter trails were maintained due to a shortage of funding (same problem on reporting to standard or not to standard exists). It is extremely likely that less than 30% of the trails (estimate) were maintained to standard due to a shortage of funding.

About 4.3 miles of Slide Creek Connector Trail, a wilderness trail, were constructed, and about 0.5 miles of the East Fork Canyon Creek trail were reconstructed. A contract was awarded for reconstruction of 5.9 miles of Pine Creek trail. Preconstruction was accomplished for the trailheads and approximately 7.6 miles of the Malheur River trail and 9.3 miles of the Squaw Rock trail for future construction work.

While Forest Plan projections for trail construction and reconstruction are not being met, some work is being accomplished on the higher priority projects with the funding the Forest received.

Recommended Action:
Recreation Staff Officer will develop a standardized reporting format for trail maintenance.

MALHEUR MONITORING ITEM 6
Wilderness

Question: What is the current level of public acceptance and expectations regarding the current wilderness conditions?

The sources of information about the current level of public acceptance and expectations regarding wilderness conditions include verbal comments made in the office and to wilderness rangers in the field, as well as letters and comments on Visitor Registration Cards.

Strawberry Mountain Wilderness: No comments were received regarding air quality or livestock. Comments were received about the amount of soil movement and loss of streamside vegetation along Indian Creek and Onion Creek following the 1996 Wildcat Fire. Tree mortality in the southeast section of the wilderness drew some comments. In regards to the issue of prescribed natural fire, the Forest received comments that varied from full support of the program to a lack of support for fires during the summer months or in scenic areas visible to the John Day Valley. There were comments made about the loss of big game cover/habitat, and native and sensitive anadromous fish habitat in the Indian Creek subwatershed. Some people were very concerned about the impact to the scenery from the fire. Some negative comments were also received about the private logging adjacent to the wilderness boundary near Graham and Roberts Creeks.

No concerns were received over camp sizes or locations, except for large camps that were set up prior to hunting seasons. However, comments were received about users leaving camps too trashy. Users have the expectation that camps can be built anywhere and that they can have campfires at all times. The visual aspect of having boats and float tubes on the lakes has been identified as an issue. Concerns have been raised about float tube users kicking up soil on the bottom of the lake and leaving the water cloudy for hours afterwards. Visitors have expressed concern over the grazing of most of the forage at the small meadows near lakes, as well as over some hitching practices. There is a concern over the unauthorized use of mountain bikes on trails, ATVs and vehicles accessing the wilderness via old roads or mining roads. The rule limiting strollers in the wilderness also drew comments. There are concerns over some snowmobiles riding into the wilderness from the High Lake trailhead. Some hikers are concerned with others cutting switchbacks near Strawberry Campground.

There are concerns when trails are closed for safety purposes because users are sometimes inconvenienced by trail closure. Compliments were received on the new Slide Connector Trail and future horseback trailhead facilities There were comments that the trails needed maintenance sooner - immediately after the snow melts off. Complaints were received about Strawberry Creek road not being wide enough for large vehicles and being extremely rough for trailers. There are requests for more horse facilities at trailheads (adequate parking and turnarounds, individual corrals, and a stock watering source within 100 yards).

There is high public acceptance for the Forest Service "presence" during the summer use season. Many people using the wilderness during this time are from outside the area and already practice some form of satisfactory wilderness ethics. There appears to be less acceptance of wilderness values by some local users. Some of the most significant problems are the use of ATVs, vehicles and snowmobiles on Baldy Mountain, caching of rafts (especially near Strawberry Lake),

caching of camps and supplies at various locations, and the tethering of horses to trees in camps and on trails.

Monument Rock Wilderness - No comments have been received about air quality, soil retention, fish and wildlife, prescribed natural fires, or scenery. The public has expressed concern about the amount of fuel loading in the Little Malheur River drainage, and the high risk of catastrophic fire due to lightning. Compliments were received about the limited livestock use at Bullrun Spring, but there were some concerns that hunters had put stock in the exclosure and overgrazed the vegetation. Favorable comments were received about a new fence that eliminated livestock along the lower 1.5 miles of the Little Malheur River.

No comments were received regarding camp sites or locations. Some visitors have expectations that camps can be built anywhere. Concerns have been expressed over recreational livestock grazing all the forage at small meadows (i.e., Bull Run and Rock Springs). There are also concerns over unauthorized use of snowmobiles near Table Mountain Lookout and off Forest Service Road 1370 in an area with inadequate designation.

Both Wildernesses: Visitors feel generally favorable about trail condition, length, number, and destination. Comments were received about horses leaving manure on trails and breaking down the trail tread. Some folks want to have trail names on the wilderness map. More signs in the wilderness that give distances to destinations are desired by some users; however, putting up additional signs would mean that we would not meet Forest Plan standards for signing in the wilderness. Some users have requested being able to hire outfitters/guides for services such as drop camps and hunting, and some outfitter/guides have requested permits to conduct services. There were no comments from the public on the backpacking outfitter/guides permit issued for the Strawberry Wilderness in 1997.

There is high public acceptance for the Forest Service "presence" during the summer use season. Many of the wilderness violations (i.e., use of motorized vehicles, use of game carts, chainsaw used to cut firewood/clear late season blow down, leaving trash) tend to occur during hunting season, when contact with wilderness rangers or law enforcement officers is very low.

No formal monitoring for public acceptance and expectations of wilderness experiences was done, but we did receive many informal comments as discussed above. This gave us some fairly reliable information. Most of the responses to these can be dealt with by the wilderness rangers and receptionists if they are properly trained. Some of the comments are good information that can be used by the manager responsible for the management of the wilderness areas in the work planning for the following year. There is a need to emphasize wilderness patrols for the education and enforcement of wilderness values during hunting season. It is unlikely that the Forest will be able to have as many wilderness patrols as needed due to low funding.

Recommended Action:

- Complete the Levels of Acceptable Change (LAC) and the capacity study for determining the need for Outfitters and Guides.
- Emphasize having wilderness patrols during the hunting season.

MALHEUR MONITORING ITEM 7
Wild and Scenic Rivers

Question: *Are the free-flowing characteristics, water quality, and outstandingly remarkable values of Designated Rivers being protected and enhanced in a manner consistent with the standards and guidelines of the Forest Plan?*

The specific questions relating to the values are from the River Management Plans.

NORTH FORK MALHEUR SCENIC RIVER MANAGEMENT PLAN

Are scenic values being maintained in project implementation?

No projects such as timber harvest or road construction have occurred in the area this year.

Are scenic values being enhanced in the river segment?

No projects were undertaken that would enhance the river's scenic values, due to lack of funding for any type of project work. Higher priority work is being conducted outside the Wild and Scenic River corridor.

Are old growth characteristics being maintained consistent with desired conditions?

No quantifiable surveys have been done to validate the desired conditions but existing characteristics are being maintained. Natural processes are being allowed to work, except fire is still being suppressed and some human activities may have some effects.

Is forage utilization within standards?

In most cases, forage utilization is meeting the standards. Inspections in the riparian areas located within the corridor for each allotment/unit showed the following:

Table III-2
RANGE UTILIZATION WITHIN THE NORTH FORK MALHEUR RIVER WILD AND SCENIC CORRIDOR
Malheur National Forest

Spring Creek:	North River Unit	Meets standard
	South River Unit	Meets standard
	River holding	Meets standard
	Bucktrough	Meets standard
	Elk Flat Unit	Does not meet
North Fork:	North River Unit	Meets standard
	South River Unit	Meets standard
Flag Prairie:	River Unit	Meets standard
Ott:	Rattlesnake Unit	Meets standard

A few negative comments about livestock use were reported. One dealt with the presence of livestock in the Crane Crossing area near the campground. Although a fence normally excludes livestock from the camping area, the permittee is still allowed to have livestock in the unit for two days while he moves his cattle from east to west across the allotment. The complaint was received after the cattle had been in the area for two days. Another comment came from a camper in the North Fork campground. He was disturbed by the lack of riparian

recovery, lack of hardwoods, and livestock use. A follow-up field trip and letter of explanation were well-received and the camper wants to visit the site again next year. U.S. Fish and Wildlife Service personnel, during their fall bull trout tour, stated that they would like to see less livestock use of the riparian vegetation in the one-mile section of river in the Elk Flat Unit. They had compliments for the condition of other sections of the river seen during their tour. The Forest also received some comments about livestock use and animal droppings on the trail below the crossing. The season of livestock use combined with the Crane crossing fence have alleviated concerns.

How are riparian elements of desired future conditions (DFCs) changing through time?

Elements of streambank stability, increased shading, and shrub composition are variable. They are improving in some areas and declining in areas with heavy livestock/ungulate use. Sedimentation, embeddedness, herbaceous and tree canopy are remaining static. A survey of cold water refugias was conducted this summer and is available upon request from the Prairie City Ranger District.

What are water temperatures within the drainage?

Water temperature data were collected on a representative number of streams influencing the river from May/early June through mid-October. The State now has standards for streams with bull trout (50° F) and without bull trout (64° F). These standards were not met in some places. The distance from the Wild and Scenic River boundary varies as indicated below.

Table III-3
STREAM TEMPERATURES WITHIN THE NORTH FORK MALHEUR RIVER WILD AND SCENIC CORRIDOR
Malheur National Forest

Stream	Maximum Temperature °F	Standard 64° F	Standard 50° F	Days Exceeded 7-day Maximum Temperature	Distance From Corridor
Sheep Creek*	57.2		X	45	200 ft.
Lower Crane Creek	68.9		X	125	600 ft.
Upper NF Malheur River	61.7		X	88	within
Lower NF Malheur River	72.5		X	126	within
Elk Creek	55.4		X	pod failure	500 ft.

*Partial data collected only - month of August lost due to equipment failure

What are stream sediment and turbidity levels?

This element was not monitored in Fiscal Year 1997.

What other pollutants are present within the river?

No formal sampling surveys were conducted. Seasonal pollutants of fecal coliform (cattle and other ungulates) occur. Minor incidental pollutants from users' wash water, and oil and gas pollutants from vehicles using the bridge and river ford crossings may also occur. However, these would most likely be inconsequential effects.

MALHEUR WILD AND SCENIC RIVER MANAGEMENT PLAN

Are scenic values being maintained in project implementation?

No projects such as timber harvest or road construction have occurred in the area this year.

Are scenic values being enhanced in the river segment?

No projects were undertaken that would enhance the river's scenic values, due to lack of funding for any type of project work. Higher priority work was conducted outside the Wild and Scenic River corridors.

Are old growth characteristics being maintained consistent with desired conditions?

No quantifiable surveys have been done to validate the desired conditions, but existing characteristics are being maintained. Natural processes are being allowed to work, except fire is still being suppressed and some human activities may have some effects.

Is forage utilization within standards?

Inspections in the riparian areas located within the Corridor for each allotment/unit showed the following:

Table III-4
RANGE UTILIZATION WITHIN THE MALHEUR RIVER WILD AND SCENIC CORRIDOR
Malheur National Forest

Star Glade:	South Unit	Does not meet standard
Dollar basin:	Dollar Unit	Meets standard
Bluebucket:	Rock Springs Unit	Meets standard along the river
	Cougar Unit	Meets standard

No concerns were received about livestock use at Malheur Ford.

How are riparian elements of desired future conditions (DFCs) changing through time?
Elements of streambank stability, increased shading, and shrub composition are variable. They are improving in some areas and declining in areas with heavy livestock/ungulate use. Sedimentation, embeddedness, herbaceous and tree canopy are remaining static.

What are the water temperatures within the drainage?
Water temperature data were collected on a representative number of streams influencing the river from late May through mid-October. The State now has standards for streams with bull trout (50° F) and without bull trout (64°F). These standards were not met in some places. The distance from the Wild and Scenic River boundary varies as indicated in the following table:

Table III-5
STREAM TEMPERATURES WITHIN THE MALHEUR RIVER WILD AND SCENIC CORRIDOR
Malheur National Forest

Stream	Maximum Temperature °F	Standard 64° F	Standard 50° F	Days Exceeded 7-day Maximum Temperature	Distance From Corridor
Upper Malheur River (Malheur Ford)	77.0		X	134	within
Lower Summit Creek (at Larch Creek)	78.8	X		88	2.5 miles

Although the Summit Creek data was collected 2.5 miles above Malheur River, considering the topography and riparian vegetative condition along the creeks lower reaches, the excessive water temperatures are probably maintained at the confluence.

What are the stream sediment and turbidity levels?

This element was not monitored in Fiscal Year 1997.

What other pollutants are present within the river?

No formal sampling surveys were conducted. Seasonal pollutants of fecal coliform (cattle and other ungulates) occur. Minor incidental pollutants from users' wash water, and oil and gas pollutants from vehicles using the bridge and river ford crossings may also occur. However, these would most likely be inconsequential effects.

Most Wild and Scenic characteristics, qualities, and values are being protected in a manner consistent with the standards and guidelines in the Forest Plan. However, there is room for improvement in regards to high water temperatures and range utilization in selected locations. Also, enhancement projects have not been implemented due to lack of funding.

Recommended Action:

Continue with monitoring and make range administration a high priority.

MALHEUR MONITORING ITEM 8
Cultural and Historic Site Protection

Question: *Are unevaluated and eligible cultural resource sites being protected so as not to compromise their potential National Register eligibility?*

Two hundred thirty-two archaeological sites were monitored in 1997, many in the course of conducting fieldwork for the Summit Fire Recovery Project. Twenty-nine sites suffered notable damage from various resource activities, natural processes, and looting. In most cases, more fieldwork is needed to determine if the damage is sufficient to threaten a site's potential National Register eligibility.

Historic mining-related structures on eighteen sites were destroyed by wildfire. An assessment of the remaining information potential of the sites has not been conducted to date.

Logging disturbance was reported as damaging four archaeological sites that were to be protected through over-snow logging or other avoidance measures. The extent of the damage has not been determined. In a few other cases, logging was conducted outside identified site boundaries, but later the boundaries were expanded to include areas with cultural material that had sustained logging impacts. In one additional case, a skidder ran across a site but no damage was noted.

Trampling impacts and subsequent topsoil erosion were identified at four sites where livestock use is concentrated due to the presence of water or other factors. Proposed fence repair will protect one site in an area excluded from grazing.

A segment of the Sumpter Valley Railroad grade was washed out by a changing stream channel. One site was damaged by the passage of heavy equipment for utility line installation. A rockshelter site was altered by people digging for artifacts. The extent of damage is uncertain, because the looters may have dug in deposits that had already been disturbed by previous looters.

A high number of sites were monitored. Mitigation measures have been proposed where appropriate, and action needs to be taken to protect sites identified as impacted, especially those located where cattle congregate. Better training of employees who conduct the monitoring is needed to identify the level of impact. Follow-up when logging impacts have taken place is needed to determine whether better communication or a change in procedures is called for.

Recommended Action:

- Follow-through with protection and monitoring of cultural sites.
- Train employees conducting the monitoring to determine the level of impact.

MALHEUR MONITORING ITEMS 10 AND 11
Resident and Anadromous Fish Habitat

Questions: *Are standards and guidelines for anadromous and non-anadromous riparian areas and related BMPs being applied in MA 3A, MA 3B, and MA 14 as directed by the Forest Plan? Is baseline data being collected and analyzed for all proposed projects in MA 3A and 3B? Are site-specific desired future conditions being established for resident and anadromous fish habitat?*

Standards and guidelines are being implemented. With the implementation of the PACFISH and INFISH Forest Plan Amendments, increased emphasis has been applied to attaining or maintaining riparian management objectives (RMOs) within riparian habitat conservation areas (RHCAs), which are generally larger than MAs 3A and 3B.

Timber sale planning has generally avoided RHCAs, except for the use of existing facilities (primarily roads), and for actions with specific riparian objectives, such as aspen rehabilitation. Post-timber harvest monitoring by District and Forest monitoring teams found that implementation of riparian standards and guidelines has generally been good, especially in terms of identifying RHCAs and marking them on the ground.

A Tri-Forest monitoring team from the Malheur, Umatilla and Wallowa-Whitman National Forests conducted a field review of six timber sales: five in the anadromous and one in the non-anadromous portions of the Forest. The results of that review are summarized in Monitoring Item 30. In anadromous RHCAs, one example was found with a landing within the outer portion on an identified RHCA. This may have been an existing facility, not a new landing. It did not result in detrimental impacts to the nearby stream or fish habitat. In the non-anadromous, three examples were found where the NEPA document identified RHCA buffers, but where activities did occur within the RHCAs. None of these resulted in detrimental impacts to the nearby streams or fish habitat. While effectiveness of soil and water quality BMPs were considered less than 100% effective, no examples were cited of where this would have resulted in an adverse impact to fish habitat.

One small sale was monitored by Long Creek District personnel in response to reports of sediment into an intermittent stream channel. In this instance, BMPs were not adequately applied to protect water quality. Specifically, inadequate water barring, soil and snow pushed into the stream channel, and equipment use in an excluded wet area were noted problems. Mitigation to correct these problems was implemented in a timely manner.

On the Bear Valley R.D. the fisheries biologist also monitored several "small projects" including special use permits, watershed, wildlife and recreation projects. For all of these projects, PACFISH and INFISH standards and guidelines were applied in the planning documents, with mitigation measures included in the implementation phase.

There continues to be progress in achieving livestock forage utilization standards in riparian areas. A few areas that exceeded standards are of particular concern because of the fish species present in those stream reaches. The proposed listing of bull trout as threatened, under the Endangered Species Act, heightens the concerns for recovery of riparian vegetation conditions in these areas, since this is essential for full recovery of the fish habitat in these streams.

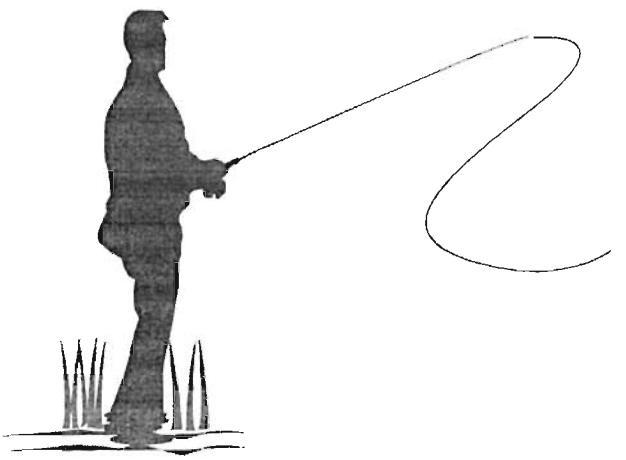
Baseline stream, riparian area and fish habitat surveys were completed. Monitoring of stream temperature was continued (see Monitoring Question 30). Data from these and previous surveys were included in project planning and watershed analyses. There is a need to "clean up" data entry errors in earlier surveys to improve the reliability of the data and to make it more usable.

For all timber sale analysis projects, and for watershed analyses, where surveys have not been done previously, baseline surveys are being completed, typically with the R-6 Hankin & Reeves (H&R) level 2 survey protocol. Other projects, such as recreation and range, usually do not have funding for updated surveys. Where formal H&R surveys have not been completed, older survey data and informal "walk through" surveys are used. Proper Functioning Condition (PFC) analyses have also been done in a few areas, primarily for grazing allotment monitoring.

Implementation of Forest Plan Amendment #29, PACFISH, and and INFISH have provided a basic set of Desired Future Conditions (DFCs) descriptions. These are referred to as riparian management objectives (RMOs) in PACFISH and INFISH. There have been a few cases where these values have been modified on a site-specific basis. As watershed analysis efforts continue, it is expected that more of this will be done. The Upper Silvies Watershed Assessment, which is in progress, is an example of where site-specific DFCs are being assessed.

Recommended Actions:

- Continue to monitor implementation of BMPs and RHCA prescriptions in timber sales and other activities.
- Review grazing allotment Annual Operating Plans (AOPs) for those allotments with bull trout habitat which did not meet utilization standards. Modify these AOPs prior to 1998 grazing season to ensure compliance with standards.
- Continue to do stream and riparian area surveys. Increase emphasis on PFC analyses.
- "Clean up" existing stream survey data. Priority should be for watersheds where watershed analysis or project NEPA are planned for 1998.
- Increase emphasis on using stream and riparian area survey data, along with input from the riparian ecologist, to recommend more site-specific DFC (RMO) descriptions in watershed analyses.



MALHEUR MONITORING ITEM 15
Proposed, Threatened, Endangered, and Sensitive Species

Questions: *Are protection and enhancement measures for proposed, threatened, and endangered species prescribed in site-specific planning efforts implemented as described? Is management of threatened and endangered species across the Forest meeting Forest Plan standards and goals and objectives of recovery plans? What is the population and distribution status and trend for these species?*

Very limited implementation monitoring has been conducted on the Forest for bald eagle habitat. In FY 97, two active timber sales and two prescribed burn areas on the Bear Valley Ranger District had the potential to affect bald eagle winter roost habitat. Mitigation to protect wintering bald eagles from disturbance while in nocturnal roosts was implemented for two large timber sales and several smaller sales in FY 97. Harvest activities were implemented as described in the EA and in the Biological Assessment. This was monitored from mid-November 1996 through February 1997 when harvest activities ceased for the season. One controlled burn has been implemented, but the effect to wintering bald eagles and their habitat has not been monitored. The other controlled burn has not been implemented.

Overall management of bald eagle habitat, including both nesting and winter roost habitat, is meeting Forest standards and the goals and objectives of the recovery plan. Informal consultation was completed with the U.S. Fish and Wildlife Service (USFWS) on projects which may affect bald eagle habitat. The nesting population on the Forest is only a small portion of the overall recovery plan goals, with the one nest fledging one young in 1997.

Bull trout populations on the Forest were proposed for listing as threatened by USFWS in June, 1997. Limited monitoring was conducted on the few projects where specific protection and enhancement measures were identified for bull trout in FY97. Monitoring primarily included the review of livestock grazing practices in pastures containing bull trout streams. Some pastures showed marked improvement using grazing practices prescribed during the last few years (e.g. - North Fork and Ott allotments) while others continue to warrant additional changes in grazing practices (e.g. - Star, Glade/Dollar Basin, Reynolds Creek, and lower Middle Fork allotments). The Spring and Flag Prairie allotments show that management changes are working in some pastures but need more attention in other pastures where bull trout are present. Use of a dispersed campsite as an industrial camp and felling the trees within the riparian zone of Reynolds Creek were discovered during a monitoring review, resulting in prompt corrective action taken by the District.

The Forest has four geographically-separated populations (metapopulations) of bull trout: the Malheur River, North Fork Malheur River, Mainstem John Day River, and Middle Fork John Day River drainages. Only the North Fork Malheur metapopulation is not identified as moderate-to-high risk of extinction, increasing the need to conserve this relatively healthy population. Monitoring completed in 1997 indicates similar but reduced effects to bull trout and bull trout habitat compared to 1996. Further analysis is needed on all metapopulations to determine how the Forest can ensure that management activities do not contribute to the loss of viability of the species.

Management of bull trout habitat to restore populations of bull trout will play a much greater role in the Forest's program of work in future years. While the Forest has two aquatic conservation strategies in place (PACFISH and INFISH), full implementation of these has been sporadic in several program areas.

Recommended Actions:

- Increase monitoring efforts of bull trout populations and habitats, especially to serve as an environmental baseline for consultation with the USFWS.
- Conduct additional watershed-scale analyses to improve the Forest's knowledge of the ecological processes at work on the Forest, especially in bull trout habitat.

Questions: *Are Biological Evaluations being prepared and are protection and enhancement measures for sensitive species prescribed in site-specific planning efforts implemented as described? Is management of sensitive species across the Forest (1) meeting Forest plan standards, (2) meeting goals and objectives of conservation strategies, and (3) resulting in activities which do no contribute to loss of viability of any native or non-native plant or animal species and will not cause a species to move towards federal listing? What is the population and distribution status and trend for these species?*

Biological Evaluations (BEs) are generally being completed for proposed activities on the Forest, but implementation monitoring of protection and enhancement activities is not being accomplished.

In general, biological evaluations are not being completed for some ongoing activities as required by manual direction and Regional guidance. Examples of ongoing activities may include livestock grazing annual operating plans, mining operations, roads, special use permits, developed recreation areas, and some silvicultural practices. Funding to complete these evaluations comes from the benefitting (requesting) function, but reduced budgets in many functions has presented a challenge to accomplish all these tasks. With the bull trout being proposed for listing, the Forest screened all ongoing activities in FY 97, and developed action plans for bull trout where moderate or high risk activities were identified. In effect, this process was a streamlined biological evaluation process for these activities, In general, however, monitoring to determine if protection and enhancement measures have been implemented is not occurring.

Specific to summer steelhead and spring chinook salmon, which were added to the Regional Forester's Sensitive Species list in August 1997, there were no biological evaluations completed in 1997 except for the Summit Fire Recovery Project. While in some instances the Forest has included some limited analysis for summer steelhead in with the closely related redband trout, essentially no previous analysis has been done for chinook. Addressing these species at an increased level of analysis will increase the time and resources required to accomplish Biological Evaluations.

Available information indicates that standards to maintain viability of some sensitive species are being accomplished on the Forest. Status of most species is still uncertain since additional data is needed on distribution, habitat requirements, and potential effects to the species. Concern continues to increase for such species as upland sandpiper, Malheur mottled sculpin (lack of data), lynx, steelhead, chinook, and bull trout. Inadequate data for other sensitive species precludes evaluation.

At least one upland sandpiper was observed in Logan Valley during 1997. Biological Evaluations in recent years have generally been limited in scope to proposed projects, and the Forest has not taken an overall look at the habitat requirements or how ongoing management activities in the area may be affecting the species. Activities taking place in the identified habitat use area generally receive low levels of coordination between specialists, and there is not an overall strategy in place for the several sensitive species found in the area.

Recommended Actions:

- Emphasize implementation monitoring of the protection and enhancement measures described in the Biological Evaluations.
- Increase priority and funding for the management of threatened, endangered, and sensitive species to ensure species viability and prevent future listings.
- Increase emphasis on completing BEs for ongoing activities.

MALHEUR MONITORING ITEM 16
Raptor Nest Sites

Question: *Are prescriptions for raptor nest site protection and associated fledgling areas or similar measures identified in site-specific planning efforts, and are these measures implemented as described following management activities?*

As part of the Regional Forester's Amendments 1 and 2, all known nests of northern goshawk are protected, and an associated post-fledgling area is identified. This has generally been accomplished on all Districts for known nests in timber sale planning areas. Protection measures for other raptor nest sites are identified if survey efforts for other resources happen to identify a raptor nest in the area where proposed activities would take place. Implementation monitoring of raptor nest protection measures occurred at minimal levels in 1997.

Recommended Action:
Start implementation monitoring of nest protection or enhancement measures.

MALHEUR MONITORING ITEM 30
WATER RESOURCES

Question: *Is the Forest complying with the Clean Water Act and the MOU with the State of Oregon by properly implementing Forest Plan Standards for water quality protection? (Forest-wide Standards 117-120 and applicable Management Area specific standards)*

The Forest continues its focus on two key areas pertaining to water quality this year. Water temperature remains an important and widespread factor limiting beneficial uses in Malheur National Forest streams. The other key area is implementation of prescribed best management practices for the protection of water resources. Integral to the success of these measures is evaluating their effectiveness.

Water Temperature

Oregon Department of Environmental Quality's 1994/1996 303(d) List of Water Quality Limited Water Bodies identifies 68 streams on the Malheur National Forest as being temperature-limited. The goal of the Forest's water temperature program is to monitor stream water temperatures from the major fish-bearing waters on the Forest. This year, the Forest monitored water temperatures at approximately 130 sites. In addition, air temperature was monitored at approximately 45 of these sites. The work was accomplished by both Forest personnel and private cooperators, such as the challenge cost share monitoring project with The Nature Conservancy in the Middle Fork of the John Day River Basin.

Table III-6, located at the end of this monitoring item, summarizes the overall results for each District and the Forest as a whole. Data was not collected on the Burns District because the fisheries biologist and hydrologist positions were vacant.

The overall summary of FY 97 water temperature monitoring found the following number of sites meet Oregon Department of Environmental Quality water quality standards for temperature during critical time periods:

bull trout waters (11%); non-anadromous waters (32%); steelhead spawning/fry emergence waters (23%); steelhead rearing waters (25%); chinook spawning/fry emergence waters (0%); and chinook rearing waters (20%).

Best Management Practices

This year, a number of rescission sales were reviewed to determine how well best management practices (BMPs) identified in the EA and/or timber sale contract were implemented, and how effective they were. A tri-Forest monitoring team from the Malheur, Umatilla, and Wallowa-Whitman National Forests conducted a formal field review of water and soil BMPs on 6 timber sales on three of the four Districts. Overall, 76%, 5%, and 19% of the BMPs reviewed were implemented as designed, incompletely implemented, and not implemented, respectively. Effectiveness monitoring found that 74%, 12%, and 14% of these BMPs were fully, partially, and not effective, respectively. Water quality BMPs were slightly less successfully implemented than the soil BMPs.

Two streams were not buffered by the width specified by the NEPA document. In one case, a primary skidtrail was located within the RHCA, and in another case a landing was located within the RHCA. Although both were clearly in violation of their respective NEPA documents, neither resulted in detrimental impacts to the adjacent streams; in fact, the locations actually resulted in less soil disturbance than if the skidtrail and landing had been located on the steeper ground outside of the RHCAs. In another case, a wet meadow had received the no-harvest buffer designated by the NEPA document, but a landing had been located on the edge of the meadow during harvest operations. The unit was logged over snow, when the meadow edge was not obvious, but it resulted in significant soil disturbance. This may have been avoided by identifying this meadow to protect in the contract or on the Sale Area Map.

All units were appropriately designated for ground skidding. Skidtrails were pre-designated, generally well located (except as noted above), and resulted in less than 20% detrimental impacts to soils. However, skidtrail rehabilitation could be improved. In a few cases, skidtrails were not seeded, waterbarred, and/or ripped as specified in the NEPA documents and contracts. Some waterbars were ineffective - either too widely-spaced, or not allowing for adequate drainage from the skidtrail.

Roads that are obliterated need to have culverts removed before taking them off the system.

The tri-Forest Teams and the Districts also examined several areas where trees had been removed under the Citizens Use Salvage Program. In quite a few cases, trees were removed from within RHCAs (riparian habitat conservation areas); some of these were apparently hazard trees. PACFISH and INFISH allow for the felling of hazard trees within RHCAs, but trees are not supposed to be removed unless down woody material requirements are met. In many cases, these requirements were not being met. Following numerous office and field reviews of the Citizens Use Program, the Forest suspended the program pending additional scoping and analysis

A review of a third sale area on Prairie City District examined the implementation and effectiveness of a KV project on Summit Creek. The project involved the placement of woody material along 1,200 feet of stream bank to impede livestock trailing, provide for bank stability, and create fish habitat. The project was not implemented as designed and was only partially effective at achieving the desired results.

Recommended Actions:

- Place a priority for allowing water resource specialists the time to analyze the stream temperature data that has been collected since electronic monitoring began Forest-wide in 1992.
- Continue to monitor stream temperatures to determine which streams have problems, and prioritize those streams with the most severe temperature problems for an assessment of what has caused the problem and what restoration measures are needed. Place a priority on examining the causal mechanisms leading to high temperatures and work towards de-listing these water bodies where warranted.
- Continue to monitor stream buffer implementation. This activity appears to have led the Forest toward better implementation of a critical element of our strategy to provide high quality water resources on the Forest.
- Develop a corporate summary data report for water quality data to facilitate incorporation of information into this report.

- Improve communications between implementation personnel and resource specialists to insure that actions that are prohibited by the Forest Plan are not inadvertently permitted to occur.
- A functional assessment of the road networks should be pursued as related to extending the channel network and as sediment source areas.

Table III-6

STREAM TEMPERATURES
Malheur National Forest

Forest Summary

Parameter	DEQ Water Quality Standard 7 Day Max Temp (deg F)	Time Period Standard Applies	Number of Streams Monitored	Number of Sites Monitored	Number of Sites Analyzed	Number of Sites Meeting Standard
Bull Trout	50	Jan 1 - Dec 31	15	20	17*	2
Non-Anadromous Waters	64	Jan 1 - Dec 31	20	25	25**	8
Steelhead spawning/fry emergence	55	April 1 - July 15	57	105	39*	9
Steelhead rearing	64	June 1 - Sep 30	57	105	39*	10
Chinook spawning/fry emergence	55	Sept 1 - Feb 28	3	15	5	0
Chinook rearing	64	Mar 1 - Sep 30	9	13	5	1

* = Partial data for 3 sites due to equipment failure
** = Partial data for 4 sites due to equipment failure

Bear Valley District

Parameter	DEQ Water Quality Standard 7 Day Max Temp (deg F)	Time Period Standard Applies	Number of Streams Monitored	Number of Sites Monitored	Number of Sites Analyzed	Number of Sites Meeting Standard
Non-Anadromous Waters	64	Jan 1 - Dec 31	8	10	10*	2
Steelhead spawning/fry emergence	55	April 1 - July 15	12	19	19**	2
Steelhead rearing	64	June 1 - Sep 30	12	19	19**	3
Chinook spawning/fry emergence	55	Sept 1 - Feb 28	1	1	1	0
Chinook rearing	64	Mar 1 - Sep 30	1	1	1	0

* = Partial data for 2 sites due to equipment failure
** = Partial data for 1 site due to equipment failure

Burns District

Parameter	DEQ Water Quality Standard 7 Day Max Temp (deg F)	Time Period Standard Applies	Number of Streams Monitored	Number of Sites Monitored	Number of Sites Analyzed	Number of Sites Meeting Standard
Non-Anadromous Waters	64	Jan 1 - Dec 31	---	---	---	---
Steelhead spawning/fry emergence	55	April 1 - July 15	---	---	---	---
Steelhead rearing	64	June 1 - Sep 30	---	---	---	---

--- = No sites monitored in FY97

Long Creek District

Parameter	DEQ Water Quality Standard 7 Day Max Temp (deg F)	Time Period Standard Applies	Number of Streams Monitored	Number of Sites Monitored	Number of Sites Analyzed	Number of Sites Meeting Standard
Bull Trout	50	Jan 1 - Dec 31	2	6	3	0
Steelhead spawning/fry emergence	55	April 1 - July 15	36	76	10	0
Steelhead rearing	64	June 1 - Sep 30	36	76	10	3
Chinook spawning/fry emergence	55	Sept 1 - Feb 28	1	13	3	0
Chinook rearing	64	Mar 1 - Sep 30	7	11	3	0

Prairie City District

Parameter	DEQ Water Quality Standard 7 Day Max Temp (deg F)	Time Period Standard Applies	Number of Streams Monitored	Number of Sites Monitored	Number of Sites Analyzed	Number of Sites Meeting Standard
Bull Trout	50	Jan 1 - Dec 31	13	14	14*	2
Non-Anadromous Waters	64	Jan 1 - Dec 31	12	15	15**	6
Steelhead spawning/fry emergence	55	April 1 - July 15	9	10	10**	7
Steelhead rearing	64	June 1 - Sep 30	9	10	10	4
Chinook spawning/fry emergence	55	Sept 1 - Feb 28	1	1	1	0
Chinook rearing	64	Mar 1 - Sep 30	1	1	1	1

* = Partial data for 3 sites due to equipment failure
** = Partial data for 2 sites due to equipment failure

MALHEUR MONITORING ITEM 31
Air Quality

Questions: *Are emissions from prescribed fires (especially particulate matter 10 microns or smaller - PM10) within the requirements of the Oregon State Implementation Plan for the Clean Air Act? Did forest prescribed burning projects impact local population centers? Did forest prescribed burning projects impact Class I Visual areas?*

Prescribed burning met the standards of the Smoke Management Program contained in the Oregon State Implementation Plan.

However, the prescribed burning emission limit for Northeast Oregon was reached during the 1997 calendar year. A limit of 15,000 tons of PM10 per year has been established in a Memorandum of Understanding among the Forest Service, Bureau of Land Management, Oregon Department of Forestry, and Oregon Department of Environmental Quality. All prescribed burning was halted when this limit was reached.

There were no known smoke intrusions to the communities of John Day or Burns/Hines during the prescribed burning season. This is verified by two methods: 1) visually tracking smoke plume direction, and 2) nephelometer readings (Oregon DEQ Smoke Monitoring Equipment). There were some complaints from the residents of Seneca in Bear Valley.

During the visibility protection period, July 1 through September 15, visibility in the Strawberry Mountain and Monument Rock Wilderness was not impacted. This is based upon visually monitoring prescribed fire smoke columns. Prescribed Natural Fires (PNF) and wildfires are exempt from this standard.

Recommended Action:
Continue to monitor.

MALHEUR MONITORING ITEM 32
Soil Resources

Question: *Is the Forest complying with Regional guidelines for the protection of soil resources by properly implementing Forest Plan Standards for the protection of soil resources? (Forest-wide standards 125-129)*

Problems resulting from multiple previous entries still exist across the Forest, but projects examined this year all displayed a high level of sensitivity for soil resources. Location and density of skidding networks are being thought out and designated in advance of actual logging, resulting in a smaller increase in compaction and reduced risks that skidding networks will unintentionally add to the existing drainage networks.

A tri-Forest Monitoring Team for the three Blue Mountains forests reviewed soil Best Management Practices (BMPs) on 6 timber sales. Most soil BMPs overlap with water quality BMPs, and the results are discussed under Monitoring Item 30.

Two formal monitoring programs were initiated in FY97. To specifically address effects of machine piling (for fuels treatment) on soil bulk density, the Bear Valley District initiated sampling. Results have not been analyzed and further monitoring efforts are planned in FY 98. The second study is related to the Summit Fire Salvage Project. In cooperation with the Blue Mountains Natural Resources Institute, 12 harvest units within the Summit Salvage area are included in a study to examine the short and long term effects of fire salvage logging. Plot measurements conducted in September 1997 included a baseline evaluation of fuels, vegetation, and soil conditions.

Recommended Actions:

- Continue efforts to control skid trail widths, spacing, and drainage alterations.
- Incorporate contract language requiring restoration of bulk density for compacted skid roads (where the standard has been violated), temporary roads, and landings.
- Continue to utilize and evaluate winged subsoiling as a treatment to restore compacted sites.

MALHEUR MONITORING ITEM 33
Minerals

Questions: *Do mining operations meet Forest Management Goals and Forest Plan Management Area Standards and Guidelines? Are lands disturbed by mining being reclaimed to a use consistent with rehabilitation standards and guidelines contained in the Forest Plan? Are the rehabilitation standards for mineral operations effective (Forest-wide #139)?*

As in the past few years, mining activity has remained low compared with the number of active operations approximately 10 years ago. This low activity level probably can be attributed to the low gold and silver prices.

Standards were met on all active mining operations under operating plans. Standards were met on most of the inspected active mine operations filed under notice of intent.

Nine active mining operations on the Long Creek District were covered by operating plans. Four of these operations are bonded. All were reviewed and working within their operating plan.

Two of these nine Plans of Operations on the Long Creek Ranger District are being reviewed for consistency with the Forest Plan. The reclamation standards approved in these plans may not meet current standards. However, neither plan has ever been implemented; both are inactive.

Two additional Plans of Operations were analyzed and conditionally approved by the Long Creek District Ranger. The claimants have not sent back the stipulations for the plan with their approval nor has the bond been paid.

One other Plan of Operations was submitted for analysis but the operator later revised his work plans for calendar year 1998 or 1999. All the NEPA work has been completed.

Notices of Intents were authorized for 25 small mining operations for the Long Creek District. All of the NOIs were reviewed by a team of resource specialists prior to authorization to ensure these small operations meet Forest Plan standards. All of the active operations inspected were meeting or were brought into compliance with Forest standards and guidelines. Minor problems occurred relating to suction dredging with temporary blocking fish passage and excavation occurring without a review of the location of heritage sites. No heritage sites were affected.

One bonded Plan of Operations on the Burns Ranger District is approved. The status is unknown. There are no authorized Plans of Operation for Bear Valley or Prairie City Ranger Districts. No NOIs were authorized for the Prairie City, Bear Valley, or Burns Ranger Districts in 1997.

The Forest has an active non-locatable (common varieties) minerals program. Operating plans are developed for the larger material extractions, with smaller entries on a case-by-case basis. Informal coordination between the District minerals technicians and the Forest Geo-tech has resulted in consistency across the Forest.

Although not specifically identified in the Forest Plan, cabin occupancy associated with mining is a lingering problem. Currently there are six unauthorized cabins being used and maintained.

Two other cabins are covered by Plans, but the use requires close monitoring and likely will be authorized in the future.

There are currently no oil and gas leases on the Forest.

Operating plans contain a reclamation plan that describes what is required of the operator after mining. Generally, the intent would be to return the site into the same condition it was prior to mining. It is recognized that the plan may change; for example, a settling pond being left for wetland habitat.

All reclamation operations are meeting Standards and Guides. Two hand-excavated sites were discovered which did not meet standards, but the origin of the work is unknown and is not authorized under any Plan or NOI.

A small placer mining operation near Vinegar Creek is in the process of being closed out.

Operating plans contain a reclamation plan that describes what is required of the operator after mining. Generally, the intent would be to return the site into the same condition it was prior to mining. It is recognized that the plan may change; for example, a settling pond being left for wetland habitat.

The Long Creek District is bonding new equipment operations and may bond hand operations on a case-by-case basis to ensure reclamation work is completed post-mining, especially in riparian areas. It is felt this direction will assist the District in achieving reclamation objectives.

There are existing open adits or shafts which are located on active claims that are safety hazards. They are not currently authorized with bonded Plans of Operations. The claimants are aware of the problem but have been unwilling to block the portals or to close the shafts. There are few options to the Forest Service to safeguard these old claims. If they are closed permanently with explosives, the rights of the claimants are violated under the mining laws. The other option is metal gates which are extremely expensive to install and maintain.

Forest-wide Standard 139 is a general statement that calls for environmental protection and ultimate rehabilitation, stating that reclamation plans should clearly state final management objectives for a specific mined area. Our past practice has been to describe the type of activities in the operating plan that the operator needs to do to reclaim the site, while stating the management objectives or desired future condition in the Environmental Analysis. The operation plan describes how and when to complete reclamation, such as contouring, subsoiling, grass seeding, and/or tree planting, but not the management objectives.

Reclamation work completed in past years was reviewed this year to determine how effective reclamation techniques were and to capture new opportunities for improvements. All sites were in a stable condition overall with an active and growing ground vegetation cover.

Recommended Action:
Continue to monitor.

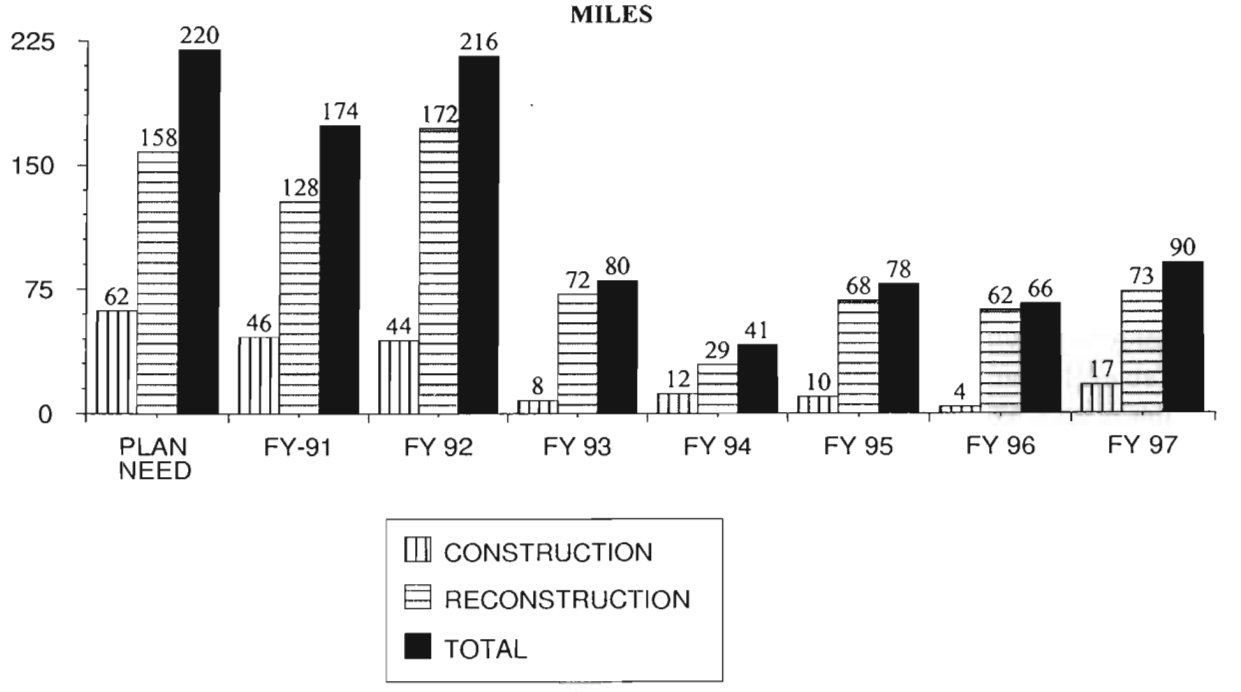
MALHEUR MONITORING ITEM 34
Road Mileage and Open Road Density

Questions: *Are roads being constructed/reconstructed as scheduled in the Forest Plan? Are roads being closed/obliterated as scheduled in the Forest Plan? Is the Forest achieving the desired conditions for open road density in each wildlife management area (summer range, winter range, wildlife emphasis) for each major watershed as shown in the Forest Plan? Is the transportation system planned at the minimum levels and being maintained to the appropriate standards to serve the resource management objectives, while meeting Forest Plan standards and guidelines for each Management Area? Are road closure techniques effective?*

Roads are not being constructed/reconstructed as scheduled in the Forest plan, but they are being constructed/reconstructed within available funding and to meet resource management needs. Reconstruction of some existing roads is needed to reduce movement of sediment off roads to streams.

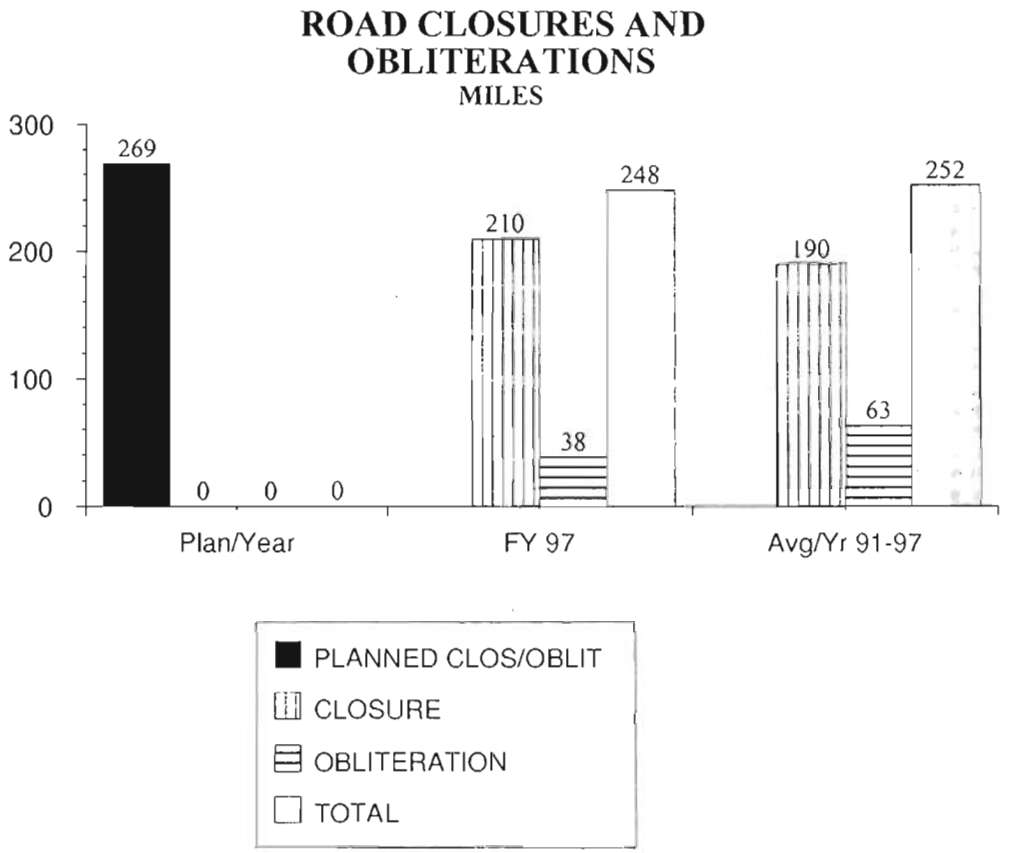
A total of 17.3 miles were constructed and 73.1 miles reconstructed on the Forest in 1997. This is much below the average annual road construction and reconstruction of 219 miles projected under the Forest Plan. Actual costs of road construction were an average of $35,950 per mile, which was more than the projected average of $17,903 per mile.

ROAD CONSTRUCTION AND RECONSTRUCTION



In 1997, 248 miles were closed/obliterated. The cumulative summary of this work, from 1991-1997 averages 252.3 miles per year, which is only 16.7 miles less per year than projected.

The number of miles of closed/obliterated roads on the Forest as well as the number of open roads have reached the target level set for FY99.



The Forest is moving to desired road densities more rapidly than was projected in the Forest Plan (see Table III-7 on the next page). On a local (seven major) watershed basis, 6 summer ranges, 6 winter ranges, and all 3 wildlife emphasis areas currently are meeting desired conditions, following fiscal year 1997. Only 191.6 miles in summer range and 74.0 miles in winter range in the Silvies watershed need to be closed for the Forest to meet FY99 open road density targets. On a Forest-wide basis, the Forest has reached minimum level of open road densities for summer range and wildlife emphasis areas.

This is a marked improvement in open road densities since 1990, when these road management objectives were implemented under the Forest Plan framework.

Table III-7
ROAD DENSITIES BY MAJOR WATERSHED
Malheur National Forest

MAJOR WATERSHED	Start of Forest Plan FY90	FY97	Forest Plan Objective for 1999
Anadromous Watersheds			
FOX/COTTONWOOD			
Summer range	4.0	1.7	3.2
Winter Range	4.0	1.8	2.2
MIDDLE FORK JOHN DAY			
Summer Range	4.6	2.4	3.2
Winter Range	7.2	1.8	2.2
Wildlife Emphasis	0.5	0.4	1.5
UPPER JOHN DAY			
Summer range	4.6	1.8	3.2
Winter Range	1.7	2.0	2.2
Wildlife Emphasis	0.2	0.4	1.5
SOUTH FORK JOHN DAY			
Summer Range	3.7	2.7	3.2
Winter Range	2.8	2.2	2.2
Wildlife Emphasis	0.3	0.4	1.5
Non-Anadromous Watersheds			
SILVIES			
Summer Range	6.8	3.6	3.2
Winter Range	3.3	3.1	2.2
MALHEUR			
Summer Range	3.2	2.5	3.2
Winter Range	4.1	1.5	2.2
NORTH FORK MALHEUR			
Summer Range	4.0	2.7	3.2
Winter Range	2.0	2.2	2.2
Forest-Wide Average			
FOREST-WIDE AVERAGE			
Summer Range	4.2	2.7	3.2
Winter Range	3.6	2.3	2.2
Wildlife Emphasis	0.3	0.4	1.5

Field reviews in 1997 identified that much of the existing road system is still inadequate to meet the objectives of resource management. Although the road closure and obliteration process is working towards this goal, there are still many unsurfaced (system and non-system) roads that, due to inadequate drainage and limited funding for maintenance, are adversely contributing road sediments into nearby stream courses during peak run-off events. Use during fall and spring periods contribute to this problem, and such use should be restricted to reduce the impact. Current road construction practices are not the contributors to this watershed concern.

Although the Forest has made marked improvements in closing and obliterating undesirable roads, there is much more work to do. There are on-going partnerships with other agencies and organizations in this effort. However, there is clearly a lack of funding to complete this work. There is also a lack of funding to maintain roads. Funding level is about 30% of the need. Resizing the road system and closing/obliterating more roads will be necessary. Roads now open for passenger car travel will need to be reduced for safety reasons due to lack of funds and because some of the native surface roads are contributing to high levels of sediment in important streams.

A 10% sample of closure effectiveness indicates an overall effectiveness rate of 75-80% with a variation among areas of 50-100%. As road closures are often found to be ineffective in eliminating motorized use, it is important to provide follow-up, corrective action. Many publics don't like the idea of reducing/resizing the road system.

Recommended Action:
Continue to monitor.

MALHEUR MONITORING ITEM 36
Fire

Questions: *How many fires occurred by Management Area (MA) and Total Acres Burned by MA, and acres burned at high intensity by MA? How many acres by MA have been prescribed burned with the following objectives: Activity Fuel Treatment, Natural Fuel treatment, and Habitat Improvement?*

The 1997 wildfire season consisted of a very wet spring and mild summer weather, resulting in very few acres burned, especially when compared to 1994 and 1996. Table III-8 displays number and acres of wildfires in FY97.

Table III-8
ACRES BURNED BY WILDFIRE BY MANAGEMENT AREA
Malheur National Forest

Management Area	Number of Fires	Acres Burned	High Intensity*
MA 1&2 - General	143	76	5
MA 4a - Big Game Winter	38	17	0
MA 6a - Strawberry Wild.	3	<1	0
MA 6b - Monument Rock	0	0	0
MA 7 - Scenic	3	<1	0
MA 10 - SPNM Recreation	6	6	0
MA 14 - Visual Corridors	14	33	0
MA 20a - Dry Cabin WEA	5	2	0
MA 21 - WEA: non-scheduled	0	0	0
TOTAL	212	135	5

* Flame Lengths of Greater than 4 Foot

Table III-9, on the next page, displays the acres of prescribed (managed) fires on the Forest in FY97. Natural fuels treatment has been increasing on the Forest, and it is expected to continue to increase commensurate with increased funding. The Forest plan did not anticipate this level of natural fuels burning, although it had projected many more acres treated for activity fuels.

Table III-9
NATURAL FUELS TREATMENT
Malheur National Forest

Management Area	Natural Fuels	Site Prep	Hazard Reduction	Habitat Improvement
MA 1 & 2 - General Forest/Range				
Underburn	7,650	804	305	2,817
Broadcast		1,354		
Pile		1,971	3,165	
MA 4a - Big Game Winter Range				
Underburn	3,765			1,105
Broadcast		61		
Pile		369		
MA 14 - Visual Corridors				
Underburn	771			
Broadcast		5		
Pile		48		
TOTALS	**12,186**	**4,612**	**3,470**	**3,922**

Recommended Action:
Continue to monitor.

Table III-10
FOREST ACCOMPLISHMENTS - FY97
Malheur National Forest

The following table provides a summary of selected Forest accomplishments and resource outputs for FY97 from all funding sources, including trust funds and partnership efforts. Where possible, these are compared to Forest Plan estimates, but in many of the cases the unit of measure has changed since the Forest Plan was completed and direct comparison is no longer possible.

RESOURCE ACTIVITY/OUTPUT	UNIT OF MEASURE	FOREST PLAN PROJECTION (avg/year)	ACTUAL FY97 FOREST OUTPUT	% ACTUAL TO FOREST PLAN
FIRE				
Natural Fuel Treatment	M Acres	2.0	22.8	1140%
Activity Fuel Treatment	M Acres	10.0	9.4	94%
FISH				
Anadromous Stream Restored/Enhanced	Miles	Not Specified	51	NA
Inland Stream Restored/Enhanced	Miles	Not Specified	4	NA
RANGE				
Permitted Grazing	*	110 M AUMs	76 M Head Months	*
Non-structural Improvements	Acres	4,800	829	17%
Structural Improvements	Structures	250	29	12%
Noxious Weed Treatment	Acres	200	207	103%
RECREATION				
Trail Construction/Reconstruction	Miles	50	5.9	12%
Developed Recreation Capacity	M PAOTs	371		
ROADS				
Construction	Miles	220	17	*
Reconstruction	Miles	(C/RC Combined)	73	*
Obliteration	Miles	Not Specified	38	NA
THREATENED, ENDANGERED, and SENSITIVE SPECIES				
Aquatic Habitat Restored/Enhanced	Miles	Not Specified	1.0	NA
Terrestrial Habitat Restored/Enhanced	Acres	4	0	0%
TIMBER				
Total Program Sale Quantity	MMBF	211	38	18%
Reforestation	Acres	12,672	9,654	76%
Timber Stand Improvement	Acres	10,800	7,988	74%
WILDLIFE				
Habitat Restored/Enhanced	Acres	750	7,097	946%
Habitat Structures	Structures	300	718	239%
WATER				
Watershed Improvements	Acres	172	281	163%

* Unit of measure changed between FY90 Forest Plan and FY97 Accomplishment Report.

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FOREST PLAN AMENDMENTS

Eight non-significant Forest Plan Amendments were prepared for the Malheur National Forest in FY 97.

Amendment Number	Date	Summary and Comments
MAL 43	12/12/96	Amends the Forest Plan to designate Seed Orchards and Evaluation Plantations as Administrative Sites.
MAL 44	10/24/96	For the Parish Timber Sale. Allows: harvest of 21"+ trees due to mistletoe infection and insect infestation; reduction of Large Tree GTR; and regeneration harvest within a Goshawk PFA.
MAL 45	01/06/97	For the Clear Creek - 91B Timber Sale. Allows harvest of 21"+ trees to reduce competition and promote future growth of large trees; to reduce levels of mistletoe; and to improve economic viability of proposed treatments.
MAL 46	01/22/97	For the Mossy Timber Sale. Allows harvest of 21"+ trees to reduce inter-tree competition and promote vigor of the residual large trees.
MAL 47	02/05/97	Amends Forest Plan for allowing oil and gas leasing under Malheur's administration. Identifies new requirements for Forest-wide Leasing Analysis.
MAL 48	07/11/97	For Badger Timber Sale. Allows cover to drop below established standards, allows harvest of 21"+trees where they compete with aspen, and allows selection harvest to maintain or enhance old forest conditions.
MAL 49	07/09/97	For the Pete Timber Sale. Allows treatment in a "stem exclusion open canopy" stand with high mistletoe and spruce budworm infection with a regeneration harvest technique. Treatment will move stand toward older structural stage faster.

The Record of Decision (8/25/97) for the Summit Fire Recovery EIS included Forest Plan Amendment #50, which would have allowed for short-term changes to Forest Plan standards for scenic quality and recreational opportunities. It would also have suspended the need for a wildlife plan for the Wildlife Emphasis Management Area. The Summit ROD, along with Forest Plan Amendment #50, was withdrawn in December, 1997.

SECTION 4:

UMATILLA NATIONAL FOREST

Blue Mountain Forests' Monitoring Report - FY 97
Section 4 - Umatilla National Forest

TABLE OF CONTENTS

LIST OF TABLES

MONITORING ITEMS NOT REPORTED FOR FY97

A number of Monitoring Items from the Umatilla Forest's 1994 Monitoring Strategy were not reported in FY 97. Some items only need to be reported every few years in order to detect trends. Other items were purposely deferred pending updated monitoring protocols or direction, and some were deferred due to lack of funding.

A hanful of monitoring items were scheduled for monitoring in FY 97 but were not reported for a variety of reasons, such as personnel turnover or other work priorities.

Monitoring Items that were not reported for any of the above reasons discussed above include the following:

Item 3	Water Quantity
Item 4	Water Quality
Item 5	Stream Temperature
Item 6	Stream Sediment
Item 7	Stream Channel/Morphological Features
Item 9	Riparian Vegetation
Item 16	Ponderosa Pine Regeneration
Item 24	Old Growth
Item 26	Woodpecker Populations
Item 27	Pine Marten
Item 30	Management Area Standards and Guides
Item 31	Primitive/Semi-Primitive Recreation and Roadless Areas
Item 32	Recreation - Off-Highway Vehicle Use
Item 33	Developed Recreation
Item 34	Wild and Scenic Rivers
Item 35	Existing Visual Conditions
Item 36	Non-Conforming Uses in Wildernesses
Item 37	Limit of Acceptable change and Amount of Primitive Wilderness
Item 41	Lands Suitable for Timber Management
Item 42	Timber Yield Projections
Item 47	Open Road Density
Item 48	Trails
Item 50	Cultural Resources
Item 51	Effects of Management Activities on Special Interest Areas
Item 52	Research Natural Areas
Item 57	Forest Contribution to Forest Products Industry

The Summary Of Recommended Actions, beginning on page 4-3, shows all Umatilla Monitoring Items and whether they were deferred, consolidated with the other Blue Mountain Forests (Section 2 of this Monitoring Report), or reported in this Section.

SUMMARY OF FINDINGS AND ACTIONS TO BE TAKEN

The table on the following pages summarizes for the Umatilla Forest the key findings and the recommended actions to be taken as a result of this year's monitoring. A more complete discussion of each monitoring item may be found later in this section or in the Coordinated Monitoring Section (Sec. 2).

It is assumed that monitoring will be continued with all monitoring items in the future, although not all will be reported every year. Three other categories of action are identified in the table as follows:

Change Practices (CP) - Indicates that the results of current practices are outside the thresholds of variability and/or are not meeting specific direction set by the Forest Plan. A change in practice or procedure may be needed.

Further Evaluation (FE) - Indicates that results may or may not have exceeded the threshold of variability, but additional information or evaluation is needed to better identify the cause of the concern and/or determine future actions.

Amend Forest Plan (AP) - Indicates that results are inconsistent with the Forest Plan, or the Forest Plan direction was not clear. The Forest Plan may need changing or clarifying through the amendment or revision process.

Summary of Recommended Action

♦ 1997 **Monitoring Report** ♦

Umatilla National Forest

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
I. PHYSICAL RESOURCES							
UMA	1	Air Quality	CP				All burning was done in compliance with smoke mgt plans. Prescribed burning was restricted in December when the emissions cap was reached for NE Oregon.
UMA	2	Soil Productivity	FE				Soil protection practices are being implemented properly and are meeting standards. Continue to monitor; effectiveness monitoring needed.
DEF	3	Water Quantity	FE				Deferred for FY97.
UMA	4	Water Quality	CP/FE				No monitoring reported for FY97.
UMA	5	Stream Temperature	CP/FE				No monitoring reported for FY97.
UMA	6	Stream Sedimentation	CP/FE				No monitoring reported for FY97.
UMA	7	Stream Channel Morphological Features	CP/FE				No monitoring reported for FY97.
UMA	8	Fire Effects - Wildfire on Water and Soils	CP/FE		X		Erosion monitoring started on 1996 wildfire areas. Soil and water impacts have been moderate, but can be high with localized weather events.
II. BIOLOGIC RESOURCES							
DEF	9	Riparian Vegetation	CP/FE				Deferred for FY97.
COORD	10	Level of Utilization	CP/FE	X			12% of the monitored pastures did not meet standards, which exceeds the threshold of variability for the Forest. Need to emphasize effectiveness monitoring to validate utilization standards, particularly in riparian areas.
UMA	11	Range Condition and Trend	CP/FE				No integrated range analysis was completed in FY 97 due to inadequate funding. Continuing need for improved protocols/process for riparian monitoring.
COORD	12	Noxious Weeds: Invasive Vegetation	FE				Over 4000 acres (gross) were treated, primarily through manual and chemical means. Continuing need to monitor and document treatment results and effectiveness of practices.

REPORT SECTION:
DEF - Deferred this FY
UMA - Reported in the Umatilla section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
COORD	13	Silvicultural Harvest Method	FE/AP			X	Clearcut acres increased this FY due to wildfire salvage. Change in harvest method needs to be evaluated and adjusted upon completion of ICBEMP process.
UMA	14	Created Openings	CM				Deferred until FY 99.
UMA & COORD	15	Stand Management - Regeneration	CP/FE		X		First year survival at 93%, an improvement from last year. Continue to review longer term survival.
DEF	16	Stand Management - Ponderosa Pine Regeneration	CP				Deferred for FY97.
UMA & COORD	17	Stand Management - Thinning/Improvement	CM				Five-year average for thinning is slightly above Forest Plan projection, but within threshold of variability.
UMA	18	Fire Effects - Prescribed Fire - Plants	CP				Use of prescribed fire is expected to increase. Need to develop coordinated monitoring questions and methods for vegetative response.
UMA	19	Vegetation Management	CM				The Forest continues to follow direction for Competing and Unwanted Vegetation.
UMA	20	Threatened, Endangered, and Sensitive Species	CM				Two new-to-Forest sensitive plant species were found in FY97. Known populations of sensitive plants appear fairly stable. Continue to monitor according to proposed cycle.
COORD	21	Insect and Disease Control	CM				Insect levels have dropped dramatically since the early 1990s.
UMA	22	Anadromous and Resident Fisheries	CM				Bull trout redd counts up over 1996; chinook trends vary by drainage. Improved PACFISH implementation in FY97. Continue to monitor population trends in cooperation with other agencies.
UMA	23	Elk/Deer Habitat and Estimated Populations	CP/FE		X		Deer and elk populations remain below Management Objectives, particularly on the north end of the Forest. Need to monitor and report on habitat conditions.
UMA	24	Old Growth Tree Habitat	FE				Not reported in FY 97.
UMA	25	Dead and/or Defective Tree Habitat	CP/FE	X	X		Snag levels generally met standards following harvest. Could improve operations process for leaving snags and down wood.
DEF	26	Pileated and Northern Three-Toed Woodpecker Populations	CM				Deferred for FY97.
DEF	27	Pine Marten	CM				Deferred for FY 97.

REPORT SECTION:
DEF - Deferred this FY
UMA - Reported in the Umatilla section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
UMA	28	Threatened/Endangered/Sensitive Wildlife and Fish Species	CM				The Dry Creek Bald eagle nest failed or was abandoned in FY 97; need to continue work on the mgt plan for the nest site.
DEF	29	Plant and Animal Diversity	CP				Most diversity questions deferred for FY97; some diversity reported regarding land birds. Continue MAPS monitoring through 2001.
III. RESOURCES AND SERVICES TO PEOPLE							
DEF	30	**A. Forest Plan Implementation** Management Areas/Standards and Guidelines	FE				Deferred for FY97.
DEF	31	**B. Recreation** Primitive/Semi-Primitive Recreation and Roadless Areas	CM				Deferred for FY97.
DEF	32	Off-Highway Vehicle Use	CP				Deferred for FY 97.
UMA	33	Developed Sites	CP/FE				Not reported for FY 97.
DEF	34	Wild and Scenic Rivers	CM				Deferred for FY 97
DEF	35	Existing Visual Condition	CP				Deferred for FY 97
DEF	36	Non-conforming Uses	CP				Deferred for FY 97.
DEF	37	Limit of Acceptable Change (LAC) and Amount of Primitive Wilderness Resource Spectrum (WRS)	CP/FE				Deferred for FY 97.
COORD	38	Allotment Planning	CP		X		One AMP and no EAs were completed in FY 97. Other processes and reduced funding have reduced the Forest's ability to complete AMPs.
UMA & COORD	39	Range Outputs	CM				Future Forest Plan Adjustment may affect outputs.
Accomp Report	40	Range Improvement	CM				Reported under Table IV-21 (Selected Accomplishments).
DEF	41	Identification of Lands Suitable for Timber Management	CM				Deferred for FY97.
DEF	42	Timber - Yield Projection	FE				Deferred for FY97.
COORD	43	Timber Offered for Sale	FE/AP		X	X	Timber offered increased above FY96 but is still well below Forest Plan projections. Need to adjust Plan when ICBEMP process is completed.
UMA	44	Availability of Firewood	CM				Current demands are being met.

REPORT SECTION:
DEF - Deferred this FY
UMA - Reported in the Umatilla section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
UMA	45	Mineral Development and Rehabilitation (MDR) Accessibility	CM				Standards and Guidelines being met.
UMA	46	Forest Road System	CP				Most Access and Travel Mgt Plans have been implemented.
DEF	47	Open Road Density	CP				Deferred for FY 97.
UMA	48	Trails	CP				Not reported for FY 97.
UMA	49	Fire - Program Effectiveness	CP/FE				FY 97 was a mild wildfire season; most acres that burned were human-caused.
DEF	50	Cultural Properties/Sites	CP				Deferred for FY 97.
DEF	51	Effects of Forest Management Activities on SIA's	CP				Deferred for FY 97.
DEF	52	Research Natural Areas (RNAs)	CP				Deferred for FY 97.
UMA	53	National Environmental Policy Act (NEPA)/National Forest Management Act (NFMA)	CP	X			Monitoring reinitiated in FY 97. A few problems with documentation identified. Need to provide NEPA training opportunities in FY 98. Need to evaluate and possibly issue white paper on Forest's NEPA review process.
IV. SOCIAL AND ECONOMIC							
COORD	54	Changes in Income Levels, Populations, and Employment	FE/AP		X	X	Employment is down 26% and annual personal income down 38% from Forest Plan projections.
COORD	55	Payments to Counties	AP		X	X	Payments to counties are down 69% from Forest Plan projections.
COORD	56	Lifestyles, Attitudes, Beliefs, Values, and Social Organizations	FE		X	X	Evaluation of this is on hold until the ICBEMP analysis is completed.
DEF	57	Forest Contributions to the Local Timber Supply	FE/AP				Deferred for FY 97.
COORD	58	Forest Budget	FE/AP		X	X	The Forest's budget is down 32% from Forest Plan projections, exceeding the threshold of variability.
COORD	59	Costs/Values of Forest Plan	AP		X	X	Timber unit costs and unit values have greatly increased over Forest Plan estimates, although volumes have dropped drastically.

REPORT SECTION:
DEF - Deferred this FY
UMA - Reported in the Umatilla section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

UMATILLA MONITORING ITEM 1
Air Quality

Questions: *What mitigation measures were used to reduce smoke emissions from prescribed burning, and how well did the measures work? Are management activities meeting SIPs and Forest Plan standards and guidelines? What is the amount of fuel (tons) consumed by prescribed burning? What are the total emissions from prescribed burning annually for all management activities?*

In CY 1997, a variety of prescribed burning activities were used to accomplish management objectives including hazard reduction, site preparation, range improvement, and wildlife enhancement. Total tons of fuel consumed and suspended particulate emissions estimates (see Table IV-1) are based on averaged fuel moistures, fuel types, and acres burned. All prescribed burning was done in compliance with State smoke management plans.

Table IV-1
AIR QUALITY - CY 1991-1997
Umatilla National Forest

Year	Total Fuel Consumed (Tons)	Particulate Produced (Tons)
1997	95,747	1,388
1996	53,720	779
1995	35,002	507
1994	96,235	1,396
1993	66,852	969
1992	156,436	2,268
1991	178,811	2,593

The Forest reporting of air quality is consistent with the reporting requirements and memorandum of understanding between the Region and both states (Oregon and Washington).

The amount of prescribed burning and particulates in 1997 increased from 1996 levels. Overall, the number of acres of activity fuels burning continues to drop from early 1990 levels although acres have recently increased. Activity fuels include concentrated fuel beds left after timber harvest operations, which consume higher fuel loads per acre. Increased burning opportunities in the spring and fall provided for increased accomplishment. The increased emissions per acre in 1997 are due to a larger portion of fall burning when fuel moistures in larger fuels are low and increased consumption occurs. In 1997, the air quality emissions cap for Northeast Oregon was reached for the first time. As a result, additional prescribed burning was restricted in December.

Recommended Action:
Continue monitoring. Monitoring and reporting of application and effectiveness of mitigation measures is needed.

UMATILLA MONITORING ITEM 2
Soil Productivity

Questions: *Are management practices/projects resulting in conditions that comply with Forest-wide Standards and Guidelines for the management of the soil resource? Do Forest-wide Standards and Guidelines adequately protect long-term site productivity? Is soil productivity maintained or enhanced over time?*

During FY 97, the focus of soil monitoring was on timber harvest activities. Timber Sale Administrators conducted most of the monitoring of soil resource productivity and erosion concerns by observing/inspecting unit erosion control measures (BMP's or Best Management Practices) and soil rehabilitation work (e.g. subsoiling, cross ditching, waterbarring, and barricading). Specific areas inspected/monitored included temporary roads, tractor skid trails, skyline/cable corridors, tractor and hand firelines, and log landings. Additional unit areas were monitored by the Forest Soil Scientist.

On Pomeroy Ranger District, eight active timber sales were monitored for compliance with Forest-wide Standards and Guidelines for soil disturbance. In 1997, the Big Springs Timber Sale completed both skyline and ground-based logging on the remaining half of the sale area. Skyline operations complied with Standards and Guidelines for soil resource protection, exceeding expectations by reducing the number of skyline corridors and laterally yarding a longer distance. Several areas could and should have been logged using a short cable system rather than ground-based systems which would have reduced the need to open existing temporary roads. Although the sale required areas of tractor fireline, many were changed to hand fireline or eliminated to reduce soil impacts. All skid trails were waterbarred, covered with slash where available, and grass seeded. Many of the existing temporary roads used for this sale were "naturalized" by pulling berms into roads, scattering slash, logs and stumps, scarifying, and grass seeding. Effectiveness of these activities was not reported.

The Wickiup and West Patit timber sales used only skyline operations and were completed in 1997. The skyline logging done on these two sales met the Standards and Guidelines with less than 5 percent total disturbed soil in the corridors. On West Patit, one road could have been eliminated with the use of intermediate supports. Although not required on this sale, intermediate supports should be used on future sales where skyline logging is specified to reduce road impacts. All roads were closed, waterbarred, and grass seeded after use in both sales.

Soil productivity monitoring on the Walla Walla Ranger District is shown in Table IV-2. Results are well within Standards and Guidelines.

Table IV-2
SOIL MONITORING RESULTS - WALLA WALLA RANGER DISTRICT
Umatilla National Forest

District	Sale	Unit	Detrimental Soil Impacts (%)
Walla Walla	Grande Ronde	17	8
WallaWalla	" "	15	10
Walla Walla	Summertime		12
Walla Walla	Andies	7	10

The Curly Salvage Sale is being harvested using a cut-to-length/forwarder mechanized logging system. Monitoring indicated the following after completing about 25 percent of the harvest acres:

- the slash mat created from the processor has substantially reduced or eliminated detrimental compaction levels;
- a usable reach of about 30 feet has helped to keep processor trails spacing at 50' or greater;
- landings were located in existing openings adjacent to the haul roads so that no landing construction has been needed;
- slash and chips remaining from a portable chipping operation were scattered back down trails reducing the need for pile burning;
- exposed mineral soil so far has been minimal, in the range of 2 percent; and landings are being seeded with native seed.

Monitoring on the Mullein Salvage Sale, North Fork John Day Ranger District, indicates that minimal detrimental soil disturbance has occurred to date. Soil type and favorable soil moisture conditions have allowed a feller-buncher and whole-tree skidding system to operate in acceptable fashion. Existing temporary roads, tractor skids trails, and log landings were utilized when possible. Tractor piling was exceptionally well done in unit 98 with very little soil displaced into the pile. Subsoiling provisions were waived where unnecessary or where soil conditions were unsuitable.

In summary, soil monitoring results indicate that skyline logging systems continue to meet Forest-wide Standards and Guidelines as long as roads are managed. Ground-based systems, especially the mechanical systems, have a higher risk of detrimentally exceeding the Standards and Guidelines. Given appropriate site conditions, adjustments for trail spacing to allow mechanized harvest systems are achieving acceptable results. Exceptions occur most commonly when moisture conditions are high and rutting occurs with heavy traffic. Whole-tree yarding systems with feller-bunchers and skidders are more likely to produce higher detrimental impacts and are only designated with an expressed need to remove large amounts of slash offsite. With proper assessment of local conditions for soil type and moisture, slash and down wood density, and close control of operators, these systems are meeting soil protection requirements.

Tractor fireline construction continues to be excessive or unneeded on some units. Cases exist where dozer-constructed firelines have created as much or more soil disturbance than careful harvest operations. Most burning operations are achieving desirable levels of intensity and duff consumption. However, observation indicates that some burns are still occurring with undesirable burn intensity levels and exposed mineral soils. Large slash piles generated by whole-tree yarding have lead to hot burns.

Planning, contractual control, and monitoring for soil impacts during and after timber harvest is continuing to improve with generally satisfactory results. Variances allowed for mechanized harvest systems are becoming more the norm as ground-based systems continue to provide good results. Existing research and on-Forest experience indicates that present management techniques should prove adequate to maintain or enhance soil productivity over the long-term. The question of adequacy of the standards continues to be one better answered by the Pacific Northwest Research.

Recommended Action:
Continue to monitor.

UMATILLA MONITORING ITEM 8
Fire Effects on Water and Soil

Questions: *How many acres (percentage) of each subwatershed have sustained high intensity burns per 3-year period? Is visible accelerated erosion occurring within a subwatershed due to past burns and/or fire management actions?*

The Summit, Tower, and Wheeler Point fire areas all were monitored for erosion in FY 97.

The Summit Fire was visited in the late fall of 1996 primarily in the South Fork Desolation drainage. Initial fall rain and snow events had begun. Little erosion was noted at that time, although some minor rilling was evident from rapid snowmelt from the first snowfalls. There was no sedimentation evident in the streams. Follow-up monitoring of the fire area, and of the South Desolation Meadows work in particular, is needed for FY 98.

The Tower Fire area was monitored more intensively and was used as part of an Intermountain Station erosion study. Upland monitoring plots were established to evaluate native and non-persistent grasses applied for emergency erosion control immediately after the fire (approximately 700 acres in Oriental, Texas Bar, and Winom Creek were seeded). Multiple transects were installed to measure presence and persistence of native grasses and non-native cereal grains; several were surveyed to evaluate surface erosion in seeded and unseeded sites. In a high intensity burn area of upper Oriental Creek, seeded areas were less prone to surface erosion (rilling and gullying) than unseeded areas. Seeded grasses provided a protective cover against rainsplash, sheetwash, and rill erosion.

Stream channel reference reaches were established on sections of Oriental and Texas Bar Creeks in the fall of 1996 to measure channel response to the Tower fire. At each site the following channel properties were measured: channel cross sections, stream profile, streambed characteristics (sizes), and abundance of large wood. In 1997, the sites were resurveyed to detect changes in these channel properties. For the most part, low or moderate channel changes occurred in channel cross section area: however, the sediment load of the stream shifted to a flatter distribution (Table IV-3). Specifically, there was an increase in fine sediment (d16) and an increase in larger particles (d84). Little change or slight decrease in the abundance of large wood occurred in the surveyed reaches (Table IV-4).

Table IV-3
CHANGES IN STREAM PARTICLES SIZES - 1996 TO 1997
(values are in millimeters)
Umatilla National Forest

Stream	d16	d50	d84
Oriental Creek 1 - Low intensity			
1996	1.18	3.3	8
1997	0.08	2.4	67
Oriental Creek 2 - High intensity			
1996	0.72	1.9	6
1997	0.06	0.4	158
Texas Bar 1 - Low intensity			
1996	16.8	26.9	58
1997	0.35	17.3	45
Texas Bar 2 - High intensity			
1996	0.34	1.5	31
1997	0.11	2.6	24

Table IV-4
LARGE WOODY DEBRIS FREQUENCIES - 1996 TO 1997
Umatilla National Forest

	NUMBER OF PIECES		
Stream	**<10 ft.**	**10-20 ft.**	**>20 ft.**
Oriental Creek 1 - Low intensity		survey length = 400 ft.	
1996	26	21	12
1997	21	17	9
Oriental Creek 2 - High intensity		survey length = 400 ft.	
1996	30	15	13
1997	21	12	16
Texas Bar 1 - Low intensity		survey length = 450 ft.	
1996	16	10	8
1997	22	10	8
Texas Bar 2 - High intensity		survey length = 350 ft.	
1996	38	18	12
1997	31	18	12

Observational monitoring was also conducted on this fire area. The area was subject to the winter weather events; however, the greatest erosional response occurred with isolated thunderstorm cells in May of 1997 which produced a heavy rain. The Hidaway watershed, upper South Fork Cable, and a small portion of lower Sheep Creek and Oriental Creek had major soil movement sufficient to plug some road culverts and scour and deposit sections of streams. A small slide occurred in Lower Hidaway just inside the fire area within an older clearcut. In general, erosion was relatively minor with streams showing suspended sediment only immediately after spring snowmelt and heavier summer rains. Vegetation has begun reestablishment and is most impressive in lower elevations close to the North Fork John Day River. Tractor fireline pose a risk for erosion especially on steep slopes. Erosion control measures installed during suppression and fire rehabilitation have worked well with a few problems occurring on the more extensively disturbed lines.

The Wheeler Point fire area was visited on several occasions from spring to fall in 1997. The area was affected by the mid-winter rain-on-snow events in early 1997. Bedload movement and redeposition was evident in several of the streams including Wheeler Creek. A tributary to Wheeler Creek showed some scouring and deepening, but was receiving more flushing of accumulated sediments. Lower reaches of drainages in the fire area showed deposition of fines along fence crossings. Overall erosion was nominal given the lack of protective ground cover due to the fire. More intensive monitoring was initiated on this fire but results are not yet available.

Risks to soil and water resources have obviously increased and are relatively high in the large fire areas given the level of disturbance from fire and other prior conditions. Intensive monitoring indicates that relative soil and water impacts have occurred but are relatively "modest" given a mild winter. The burn area seeding and other treatments are having positive effects. But observations also show that impacts can be relatively high with localized weather events (even in roadless areas) on the Tower Fire.

Recommended Action:
Baseline monitoring needs to continue with follow-up documentation of findings. Soil, water, and vegetation recovery from wildfire needs to be tracked.

UMATILLA MONITORING ITEM 11
Range Condition and Trend

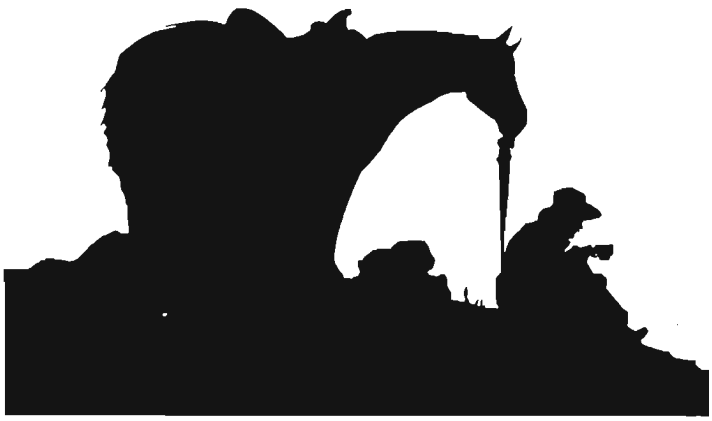
Question: *Are range vegetation conditions on primary and secondary range being improved to and maintained at a satisfactory condition?*

No integrated range analysis was completed on the Forest in 1997. The current pace of analysis is inadequate to ensure up-to-date information for allotment management planning. The shortfall directly relates to inadequate funding for integrated range analysis and support.

A long-term continuing need exists to define and implement a standardized riparian monitoring process that can identify "conditions" and relate them to impacting activities. Currently, no processes have been devised to adequately define riparian "conditions and trends". Some use is being made of the Proper Functioning Condition Assessment. Continued use of this process will add to the knowledge base concerning riparian/aquatic conditions.

Recommended Action:

- Continue to monitor. Report findings on riparian rangeland and upland rangeland separately in order to provide a better link to other monitoring items. This will be initiated as soon as classification systems and processes are in place to allow for inventory of riparian plant communities.
- Establish processes to define riparian "condition" in terms of impacting activities.
- Develop process to allow for reporting of currently existing riparian data.



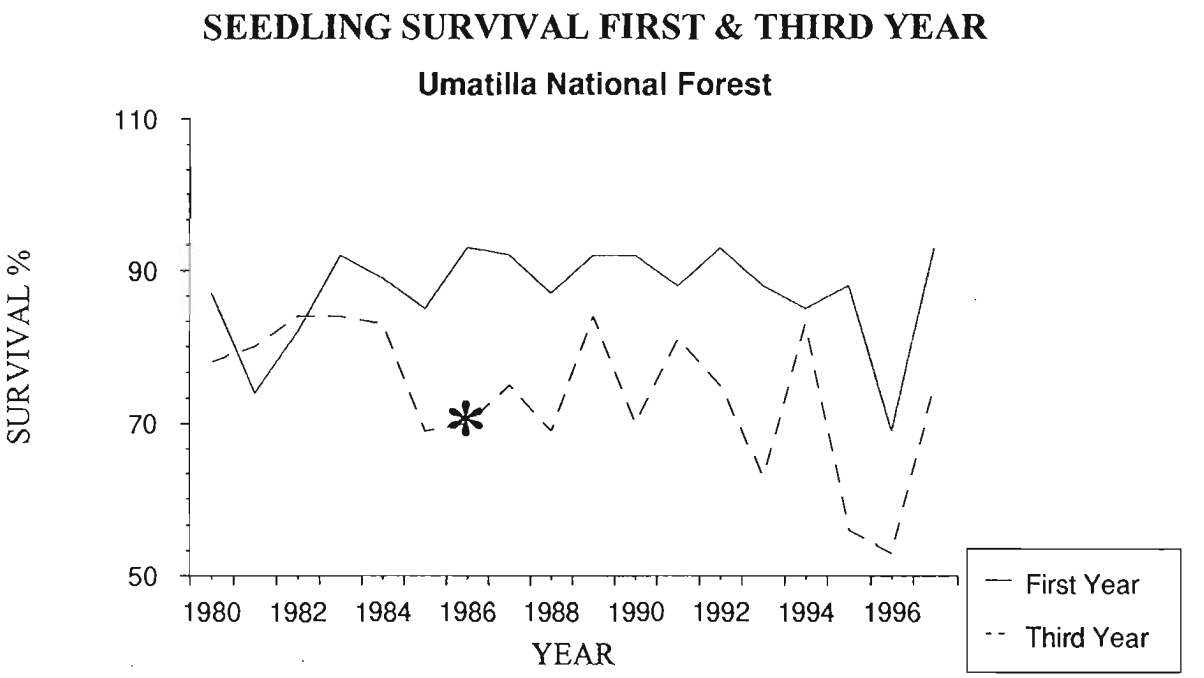
UMATILLA MONITORING ITEM 15
Stand Management - Regeneration

Questions: How many acres were reforested this fiscal year using natural and artificial regeneration practices? Are acres being satisfactorily restocked within 5 years of final harvest as per NFMA?

The bulk of this question was answered in the Combined portion of this report (Section 2), where direct comparisons with the other Blue Mountain Forests was possible. However, the Umatilla is also tracking additional information and details, which are reported here.

Currently, the Forest performs regeneration examinations after the first and third growing season following planting or natural regeneration; units must meet minimum stocking guidelines prior to certification as to being reforested. A staked row method is used to determine survival and growth. The Forest certified a total of 7,760 acres (planted and natural regeneration) in 1997 as meeting or exceeding minimum stocking standards after 3 years.

Historical survival (first and third year) percentages are shown below for the Umatilla since 1980. First year survival is averaging 87 percent and third year survival has been averaging 70 percent. Several factors such as weather, site conditions, vegetative competition, and damage from animals are contributing to the low survival rate for third year. The Forest has applied various measures to increase survival, including improved seedling handling, planting practices, site preparation, animal damage control, and contract administration. Although these are effective, the Forest will continue to investigate other options to increase survival.



* The third year survival data for 1986 is not available.

As described in past monitoring reports, tree survival has been low on the Heppner Ranger District. In 1995, the Heppner Ranger District began an intensive monitoring program to identify the reasons for the failures, identify measures needed to improve (first year) planting success, analyze the effectiveness of vexar tubing (a protective device to prevent browse damage), and identify cost reduction measures. Results from the 1995 planting were initially good with adequate stocking on 90 percent of the planted acres. However, overall survival after three growing seasons was only 66 percent. The most common damage agents noted were gophers and moisture stress due to grass competition and late season drought. Almost 40 percent of the dead trees did not have any specific damage agent noted, and in most cases, trees were missing, with no obvious cause of death. At this time, no conclusions have been made from the monitoring.

Approximately one-half of the trees surveyed had vexar tubing installed at the time of planting. Survival of the tubed seedling versus the non-tubed seedlings varied by geographic area. In the northeast part of the District, the tubed seedlings had lower survival than those not protected, and on the west end of the District, the tubed seedlings had much higher survival rates. This trend held true for all tree species. In contrast to survival, the occurrence of browse damage was clearly greater for the non-tubed seedlings in all geographic areas surveyed. Despite higher incidence of browse damage, no apparent differences were observed in third year height growth for the tubed and non-tubed seedlings. This study continues.

Recent trends for planting and natural regeneration vary from Forest Plan projections (planting is lower and natural regeneration is higher). Changes are anticipated as the lodgepole certification program "winds" down and the recent insect mortality and large fires areas are reforested. First and third year survival increased substantially from 1996. However, third year survival is still a major Forest-wide problem.

Recommended Action:
The Forest still needs to complete a thorough review of the program and investigate alternatives to increase survival success.

UMATILLA MONITORING ITEM 17
Stand Management - Thinning/Improvement

Question: *How many acres were treated with stocking level control? How many acres needing stocking level control were treated?*

The total amount of pre-commercial thinning accomplished on the Forest in 1997 was 2,769 acres. The planned output is 2,900 acres (Forest Plan, Table 4-1). Thus, the 1997 accomplishment represents approximately 4 percent below planned output, which is within the threshold of variability for this item (20% deviation). The following table shows the actual output from 1993 to 1997 and the average percentage of actual output measured against planned output.

Table IV-5
PRECOMMERCIAL THINNING ACRES - FY '93-97
Umatilla National Forest

1993	1994	1995	1996	1997	5 Year Average	Percentage of Forest Plan (Actual/Planned) 5 Year Average
3,178	2,301	3,132	4,127	2,769	3,101	+6.9%

Not all of the acres needing stocking level control, as reported in the Out Year Projection report (a reporting system which identifies projects in need of management action) were treated in FY 97. Full funding for stocking level control has been lacking for several years and the Forest has a backlog of acres to treat.

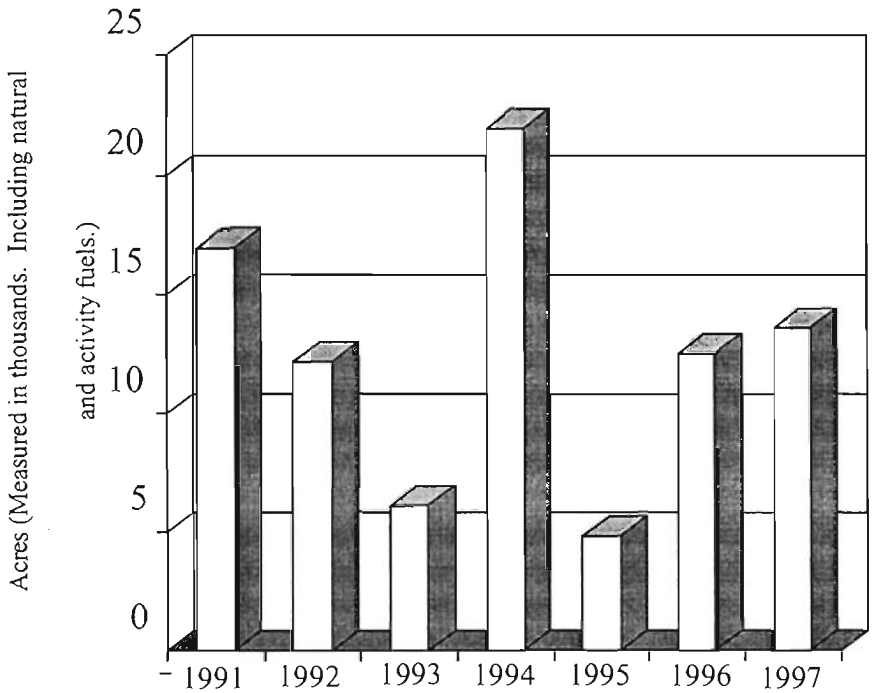
Recommended Action:
Continue to monitor.

UMATILLA MONITORING ITEM 18
Fire Effects - Prescribed Fire

Questions: *Are the prescribed fire treatments meeting Forest Plan residue (materials left on site) and resource objectives? What are the stand structure (overstory and understory) and species responses in the prescribed burned area?*

Monitoring for this item was deferred for FY 97. The intent is to develop and implement more systematic and standardized questions, methods and reports for the three Blue Mountain Forests. However, the Forest decided to show the accomplishment for 1997 since the prescribed fire program continues to be used as an important management tool to accomplish hazard reduction, site preparation, range improvement, wildlife enhancement and other programs. The following chart shows the total prescribed fire acres from 1991 to 1997.

TOTAL PRESCRIBED FIRE ACRES
1991 to 1997
Umatilla National Forest



In 1997, prescribed fire program treatment acreage increased back to a near "normal" activity schedule. The Forest expects that the use of prescribed fire will continue to increase as emphasis is placed on ecosystem management, even though years of unfavorable weather conditions can be expected, such as 1993 or 1995.

Recommended Action:
Base future monitoring on the Blue Mountains coordinated approach.

UMATILLA MONITORING ITEM 19
Vegetation Management

Questions: Is the Forest meeting the intent of the Managing Competing and Unwanted Vegetation Final Environmental Impact Statement and Mediated Agreement? Is the Forest reporting vegetation management project analysis results in project environmental assessments and environmental impact statements? Is the Forest applying mitigation measures as outlined in Appendix E of the Forest Plan FEIS? How effective are the mitigation measures?

In FY 97, the Forest continued to apply the requirements of the Final Environmental Impact Statement (FEIS) and the Mediated Agreement (MA) for Managing Competing and Unwanted Vegetation. During the year, activities included preparing sites for planting by reducing logging residue; releasing young conifers from competing vegetation; managing fuel hazards and preventing wildfires; improving range conditions; controlling noxious weeds; improving wildlife habitat; maintaining recreation and administrative facilities; maintaining roadsides and utility corridors; and supporting the tree genetics and research program. Five specific methods of vegetation management explained in the FEIS (pages II-83 through II-109) may be used in the activities including: 1) herbicides, 2) prescribed burning, 3) manual work, 4) biological treatments, and 5) mechanical means.

The results of an assessment of vegetation management activities, and their relationship to requirements from the FEIS/MA, are typically disclosed in a "Vegetation Management Plan". The Plan is prepared during the environmental assessment (EA) phase of project development and is stored with other EA documents and materials (typically a project file). The plan evaluates threshold levels for which vegetation management activities would be initiated; the need for vegetation management; the treatment methods being considered; evaluation of vegetation management strategies (prevention, early treatment, maintenance, correction, and no action); project design and scoping; effects of implementation; and action and monitoring. In FY 1997, a vegetation management plan or closely-related vegetation management checklist was completed for those projects on all districts. Where monitoring has occurred, mitigation results are reported in other appropriate monitoring items.

The Forest expects to continue monitoring the effects of managing vegetation in nine specific activities: 1) Reforestation - site preparation and release; 2) Fire Management Program; 3) Range Improvement; 4) Noxious weed control; 5) Wildlife habitat improvement; 6) Recreation Management Facilities Maintenance; 7) Rights-of-Way Maintenance; 8) Genetics Program; and 9) Noxious Weed Management.

Recommended Action:
Continue to monitor.

UMATILLA MONITORING ITEM 20
Threatened, Endangered, and Sensitive Plant Species

Question: Is adequate protection afforded the documented sensitive plant species of the Forest?

During FY 97, the Forest completed sensitive plant surveys on 138,116 acres. The cumulative Forest total amounts to more than 1 million acres. Botanical surveys were conducted on all districts with 64,755 acres completed on North Fork John Day, 39,416 acres on the Walla Walla, 22,100 acres on Pomeroy, and 10,931 acres on Heppner. Notable gaps in plant data occur in the Mill Creek Watershed and a large portion of the Wenaha-Tucannon Wilderness Area.

Two new-to-the-forest sensitive species were found during the summer of 1997 although both of these species - Idaho gooseberry and diffuse stickseed - are under consideration for de-listing in a revised, updated Regional Forester's List of Sensitive Plant Species. A total of 37 new sensitive plant populations were added to the Forest's database this year, bringing the total number of sensitive plant populations known to occur on the Umatilla to 716. Totals are expected to change as the Regional Forester's Sensitive Species list is revised and updated.

During 1997, a total of 61 Biological Evaluations for plant species listed as "sensitive" on the Regional List were issued for the Ranger Districts projects: 12 Biological Evaluations on Pomeroy, 9 on the Walla Walla, 23 on the North Fork John Day, and 17 on the Heppner ranger districts.

Monitoring activities for sensitive plant populations focused again on Pomeroy and Heppner Ranger Districts. On Pomeroy Ranger District, two populations of clustered lady's clipper orchid (Cypripedium fasciculatum) were monitored in order to determine if mitigation measures listed in Biological Evaluations had been implemented. Neither population showed declines in numbers during 1997, and the habitat surrounding both populations remained unaltered. The only population of Douglas clover (Trifolium douglasii) extant in the State of Washington was also monitored because of its proximity to recreational projects. This population was also stable. Monitoring plots were established for the Nez Perce mariposa lily and for Spalding's silene in order to determine the effects of prescribed fire and encroachment by noxious weeds.

On Heppner Ranger District, the Forest's only known population of arrow-leaved thelypody (Thelypodium eucosmum) was monitored within its protective exclosure. The population remains stable at approximately 1,200 plants, but the plants and seed crops were noticeably larger because of the fencing. The population is anticipated to increase in size as a result of the protection.

Recommended Action:

- Continue monitoring, with priority given to at-risk populations. Other populations should be monitored as time and budget allow, particularly if such populations are subjects of mitigation measures written into biological evaluations.
- Focus monitoring efforts on species that are least likely to be dropped from the Regional Forester's Sensitive Plant Species List.

UMATILLA MONITORING ITEM 22
Anadromous and Resident Fisheries

Questions: *Are the population trends for anadromous and resident Management Indicator Species stable to improving? Are Forest Plan goals, objectives, and desired conditions for anadromous fish being achieved? Is fish habitat capability improving as projected in the Forest Plan?*

Monitoring results for fisheries were not reported in FY96, so they are reported here where appropriate and available.

The Forest, in cooperation with the Oregon Department of Fish and Wildlife, the Washington Department of Fish and Wildlife, and the Confederated Tribes of the Umatilla Indian Reservation, have been conducting bull trout spawning surveys within the Umatilla, Walla Walla, Tucannon, and Wenaha Rivers and Lookingglass Creek watersheds. The information is being used to establish index reaches to monitor bull trout spawning trends on the north half of the Forest. Preliminary results are displayed in the following table.

Table IV-6
BULL TROUT REDD COUNTS
Umatilla National Forest

Subwatersheds	Miles Surveyed	Total Bull Trout Redd Count		
		1994	1995	1996
Tucannon	8.5	131	114	184
Lookingglass Creek	12.3	15	16	29
Touchet	8.2	86	27	64
Mill Creek	15.7	191	165	134
Walla Walla	21.5	143	114	177
Umatilla	18.7	39	22	37
TOTAL	84.9	605	458	625

The Oregon Department of Fish and Wildlife (ODFW) has established spring chinook spawning distribution and abundance index reaches on Clear Creek, Granite Creek, North Fork John Day River, and Wenaha River. The North Fork John Day system index streams and Wenaha River spring chinook index areas were surveyed again in 1996 and 1997. The results of the past few years of monitoring are shown in Tables IV-7 and IV-8.

Additional spring chinook spawning surveys were conducted by North Fork John Day Ranger District employees again in FY96, although not in FY97. Camas, Hidaway, and North Fork John Day River were surveyed for chinook redds, carcasses, and number of live fish. Results from the last five years of survey are displayed in the table below, along with results from the ODFW surveys.

Table IV-7
CHINOOK COUNTS BY INDEX REACH
Umatilla National Forest

	Year	No. of Redds	No. of Carcasses	No. of Live Fish
ODFW MEASUREMENTS:				
S. Fork Wenaha River (above Mill Cr. to Forks	1994	12	0	2
	1995	2	0	1
	1996	28	3	16
	1997	35	9	11
Wenaha River (Forks to Crooked Creek)	1994	30	5	18
	1995	18	3	10
	1996	69	11	54
	1997	33	27	18
Milk Creek (tributary of Wenaha River)	1994	0	0	0
	1995	0	0	0
	1996	0	0	0
	1997	0	0	0
Butte Creek (tributary to Wenaha River)	1994	0	0	0
	1995	1	0	0
	1996	5	1	3
	1997	4	1	0
USFS MEASUREMENTS (North Fork District)				
Camas Creek	1992	0	0	0
	1993	2	1	0
	1994	5	1	3
	1995	0	0	0
	1996	0	0	0
Hidaway Creek	1992	0	0	0
	1993	0	0	0
	1994	0	0	0
	1995	0	0	0
	1996	0	0	0
N. Fork John Day River	1992	5	4	0
	1993	21	4	5
	1994	2	9	0
	1995	1	0	10
	1996	5	7	0

Table IV-8
ODFW CHINOOK REDD COUNTS
North Fork John Day River Drainage
Redds/Mile

	1992	1993	1994	1995	1996	1997
Clear Creek	11.7	25.6	4.0	2.8	9.5	7.3
Granite Creek	16.5	19.8	14.5	2.2	14.7	10.0
N.Fork John Day River (Wilderness)	28.1	27.3	15.6	2.5	20.6	18.1
N.Fork John Day River (Lower)	11.4	16.1	7.6	0.7	12.6	5.2

The number of redds in Clear and Granite Creeks was relatively stable in the late 1980s and increased in the early 1990s. The number of redds in the North Fork John Day River has generally increased in the early 1990s. Redd counts in all index streams in 1994 and 1995 were substantially lower than in the recent past; chinook salmon redd counts reported for the North Fork John day system in 1995 were the lowest recorded since 1959. Spring chinook redd counts were up in 1996 and 1997.

As part of the PACFISH Implementation Review process, the Forest has reported results from 1995 through 1997 monitoring.

Table IV-9
PACFISH IMPLEMENTATION STRATEGY
Umatilla National Forest

	PROJECT STATUS			Pacfish Status*		Pacfish Default	Modified	Watershed Analysis Completed	
FY	Complete	In-progress	Proposed	Y	N	RHCAs	RHCAs	Y	N
95	67	116	34	199	12	173	13	29	217
96	95	138	28	215	47	215	13	54	199
97	100	156	40	286	4	266	7	74	222

* PACFISH Standards and Guides implemented on the project.

As seen in the above table, the Forest has generally implemented PACFISH standards and Guidelines on Forest projects. In 1996, projects with insufficient monitoring information were reported as not meeting PACFISH. The monitoring deficiency was recognized and corrected in 1997.

The Forest continues to rely heavily on State fisheries management agencies and the Confederated tribes of the Umatilla Indian Reservation monitoring efforts to determine anadromous fish population trends. The spawning escapement trend for both chinook salmon and steelhead trout over the recent past is in decline. Spring chinook and summer steelhead in the Snake River basin are listed as Endangered Species under the Endangered Species Act (ESA). Bull trout and mid-Columbia summer steelhead are proposed for listing under the ESA. The focus of aquatic species management for the Forest will be greatly influenced by ESA management in the coming years.

Recommended Action:
Continue to make this an emphasis item for monitoring.

UMATILLA MONITORING ITEM 23
Elk/Deer Habitat and Estimated Populations

Questions: Are the populations being maintained as predicted in the Plan? Are the standards and guidelines being followed as required to meet habitat effectiveness index levels established for the subwatershed and (aggregated to the) management area? Are the assumptions pertaining to the prediction of cover resulting from harvest and silvicultural activity valid? Are the assumed interrelationships between cover spacing, cover quality, open roads valid? Are the assumptions relating elk habitat effectiveness to elk populations valid?

Elk and deer data was derived from Oregon Department of Fish and Wildlife and the Washington Department of Fish and Wildlife surveys. Tables IV-10 and IV-11 contain elk and deer management objectives, population estimates, bull or buck ratios, and calf/fawn survival rates for each management unit occurring on the Forest. Management units are separated by state and aggregated into groups for evaluation.

Because the bulk of suitable elk habitat within state management units occurs on National Forest land, the estimated elk population and distribution in Table IV-10 closely reflect the elk populations on the Forest. The total numbers on the Forest have remained somewhat stable over the last 3 years but are, as a whole, less than the management objectives. In 1997, the estimated total for the Forest was about 12% below management objectives (MO). This is about 1% lower than the previous year and 2% above 1995 estimates.

Elk populations on the north half continue to decline and remain below objectives. The south half remains stable and above MO. Overall, the Forest-wide elk population (total) is within the 20 percent threshold of variability identified in the Forest Plan. Concerns exist about the north end management units which continue to exceed the 20 percent threshold of variability. Many of these units have been declining since the mid-80's. Speculation about low elk populations in Washington and adjacent Oregon units centers around low calf survival, changes in habitat suitability leading to a seasonal shift in the herd followed by an increase in vulnerability, and the continued harvest of cow elk in antlerless hunts in Washington and Oregon. Currently, the Washington Department of Wildlife is revising/updating the Elk Herd Plan for the Blue Mountains to address these concerns.

Across all management units on the Forest, bull/cow ratios have been widely inconsistent for the last 3 years. The exceptions are the Lick Creek, Mt. Emily, and Heppner units where bull/cow ratios have been consistently low for the last 3 years. In 1997, the majority of units were below SMOs for bull/cow ratios. However, Forest-wide average bull/cow ratios (Forest average) are within the Forest Plan 20 percent threshold of variability.

In 1997, the majority of management units have low calf/cow ratios. Only three management units (Desolation, Heppner, and Fossil) have moderate calf/cow ratios (>50 calves/100 cows) on the Forest. Calf/cow ratios have been consistently low (<36 calves/100 cows) in management units on the north end and the Ukiah unit of the Forest over the last 3 years. Because of low calf/cow ratios across the Forest, calf/cow ratios are greater than the 20 percent threshold of variability.

Table IV-10
ROCKY MOUNTAIN ELK MANAGEMENT OBJECTIVES AND WINTER POPULATION ESTIMATES FOR 1995-1997
Umatilla National Forest

Management Unit	Population Estimates				Bulls Per 100 Cows				Calves Per 100 Cows		
Washington ** "North"	Mgmt. Objct.	1995	1996	1997	Mgmt. Object.	1995	1996	1997	1995	1996	1997
Watershed	400	400	375	375	15	28	19	26	20	13	24
Dayton	800	835	725	719	15	14	13	9	22	18	25
Tucannon	1,200	511	410	376	15	11	12	13	17	16	23
Wenaha	1,200	800	700	600	15	23	27	19	19	6	13
Lick Cr.	1,000	700	650	600	15	7	6	5	23	14	23
Mt. View	1,100	450	520	475	15	38	25	14	23	21	27
Washington Total	5,700	3,696	3,380	3,145	15#	20#	17#	14#	21#	15#	23#

Oregon *	Mgmt. Objct.	1995	1996	1997	Mgmt. Object.	1995	1996	1997	1995	1996	1997
"North"											
Wenaha	4,250	1,900	1,700	1,500	10	17	14	12	23	14	14
Walla Walla	1,800	2,000	1,900	1,600	10	11	14	11	29	21	20
Mt. Emily	5,700	6,000	6,000	6,300	10	7	6	6	35	17	27
"South"											
Ukiah	5,000	5,800	5,500	5,500	10	2	8	8	31	25	25
Desolation	1,300	1,400	1,400	1,600	10	6	10	10	48	27	52
Heppner	2,800	2,950	2,900	3,300	10	5	6	5	39	43	52
Fossil	700	850	800	900	10	6	12	4	46	53	53
Oregon Total	21,550	20,900	20,200	20,700	10#	8#	10#	8#	36#	29#	35#

"North" Total/Avg.	17,450	13,596	12,980	12,545	13#	17#	15#	13#	23#	16#	22#
"South" Total/Avg.	9,800	11,000	10,600	11,300	10#	5#	9#	7#	41#	37#	46#
Forest Total/Avg.	27,250	24,596	23,580	23,845	12#	13#	13#	11#	29#	22#	29#

* Source: Big Game, Oregon Department of Fish and Wildlife, 1997
**Source: Pat Fowler and Woody Myers, Washington Department of Wildlife
\# Average for the area described

Population estimates and objectives for deer (Table IV-11) have been adjusted to closely reflect suitable habitat and estimated numbers on the Umatilla. Unlike elk, deer are distributed throughout the management units and don't occur entirely on Forest lands. Generally, deer populations on the Forest have remained somewhat stable over the last 3 years but as a whole remain below management objectives. In 1997, the estimated total for the Forest was about 9 percent less than the management objectives. However, the population estimate is an increase from 1996 and near the population level for 1995. Geographically, the population on the north half has declined over the last 3 years and is currently 24 percent below the management objective. The south half remains stable and is near the MO for the area (-1%). Overall, the Forest-wide deer population (total) is within the 20 percent threshold of variability identified in the Forest Plan.

In general, buck/doe ratios have been inconsistent across all management units for the last 3 years. In 1997, the majority of units are below MO for buck/doe ratios. However, geographically, buck/doe ratios were slightly below MO on the north end and slightly above MO on the south end. The resultant Forest-wide buck/doe ratio of 14 is slightly below the MO of 15 bucks/100 does, but within the Forest Plan threshold of variability. The fawn/doe ratios for the north and south end of the Forest are the highest estimates within the last 3 years.

Table IV-11
DEER (Mule and White-tailed)
MANAGEMENT OBJECTIVES AND WINTER POPULATION ESTIMATES FOR 1995-1997
Umatilla National Forest

Management Unit	Population Estimates				Bulls Per 100 Cows				Calves Per 100 Cows		
Washington ** "North"	Mgmt. Objct.	1995	1996	1997	Mgmt. Object.	1995	1996	1997	1995	1996	1997
Watershed	N/I	125	95	65	16	21	--	20	43	--	40
Dayton	N/I	880	755	945	16	17	16	15	89	38	70
Tucannon	N/I	380	250	250	16	26	10	10	45	50	70
Wenaha	N/I	190	220	190	16	21	7	10	43	65	39
Lick Cr.	N/I	125	95	95	16	11	16	20	20	30	66
Mt. View	N/I	315	190	125	16	10	14	10	46	27	65
Washington Total	2,035	2,015	1,605	1,700	16#	18#	13#	14#	48#	42#	58#

Oregon *	Mgmt. Objct.	1995	1996	1997	Mgmt. Object.	1995	1996	1997	1995	1996	1997
"North"											
Wenaha	1,050	840	700	700	12	7	11	10	65	39	64
Walla Walla	570	400	360	360	15	13	11	6	60	72	52
Mt. Emily	1,705	1,400	1,400	1,400	15	14	17	14	67	63	66
"South"											
Ukiah	2,345	2,100	2,100	2,240	15	18	24	22	57	52	49
Desolation	2,125	1,490	1,275	1,530	12	14	32	21	--	37	73
Heppner	4,050	4.250	4,050	4,740	12	16	12	13	63	49	65
Fossil	1,400	1,260	1,260	1,300	12	13	11	13	53	44	79
Oregon Total	13,290	11,740	11,145	12,270	13#	14#	17#	14#	61#	51#	64#

"North" Total/Avg.	5,405	4,655	4,056	4,130	15	16#	13#	13#	53#	48#	59#
"South" Total/Avg.	9,920	9,100	8,685	9,810	13#	15#	20#	17#	58#	46#	67#
"Forest Total/Avg.	15,325	13,755	12,750	13,940	15#	15#	15#	14#	54#	47#	61#

* Source: Big Game, Oregon Department of Fish and Wildlife, 1997
**Source: Pat Fowler, Wildlife Biologist, Washington Department of Wildlife
Average for the area described N/I No information Available Dayton - Formally Touchet and Eckler Units

Both State agencies continue to adjust and arrange hunting seasons to change herd structure. Populations continue to be manipulated in order to bring deer and elk populations closer to management objectives. Monitoring of habitat and habitat quality was not done this year. Project level estimates were not reported.

As in the recent past, total elk population trends remain relatively stable but are below state management levels. Concern still exists with north end populations and herd parameters. Deer populations are also relatively stable but below state management objectives.

Recommended Action:
Habitat monitoring and evaluation is needed on the Forest, particularly where large-scale insect infestations and fires have occurred and have likely affected overall habitat quality.

UMATILLA MONITORING ITEM 25
Dead and/or Defective Tree Habitat

Questions: *Are dead and defective trees being left in appropriate numbers and sizes with proper distribution following timber sales, firewood cutting activities, post sale treatments, and other management activities as outlined in the standards and guidelines? Are sufficient numbers, size classes and distribution of green replacement trees and down logs being left following all management activities?*

Dead standing tree surveys are conducted at the project level on most of the Districts on the Forest. Inventories conducted in 1997 show that snag standards and guides from the "Eastside Screens" (Regional Forester's Forest Plan Amendment #2, June 1995) and Interim Snag Guidance for Salvage Operation (Umatilla NF 4/14/93) were addressed. Table IV-12 displays snag densities through various phases of the timber sale.

Table IV-12
SNAG DENSITY (snag/acre) FOR TIMBER SALES
Umatilla National Forest

	Eastside Screens: Standard		Post-Marking Inventory		Post-Harvest Inventory	
Timber Sale	**Total**	**>20"dbh**	**Total**	**>20" dbh**	**Total**	**>20"dbh**
Grande Ronde Salvage	1.8	0	1.9	0	N/D	-
South Cabin	2.25	0.14	6.5	N/D	N/D	-
Cold 52	2.25	0.14	5.0	N/D	2.4	0.7
Cold 55	2.25	0.14	3.0*	0.9*	3.8	1.0
Big Spring	2.25	0.14	N/D	-	3.9	N/D
Teal	2.25	0.14	N/D	-	7.6	N/D

N/D - No Data was collected or has not been collected at this time. * - Marked snags for retention

When data was collected on marked sales, snag densities met or exceeded the minimum standards for the "Eastside Screens" and the Forest guidelines. The table shows one sale with a reduction in snags/acre after harvest. The reduction in snag densities after harvest can be attributed to several factors, including effects from mechanical activity, snag selection (soft vs hard snags, quality, etc.), distribution in the unit (scattered vs clumping), and placing snags in conflict with activities (landings, skid trails, etc.). However, snag densities met or exceeded the threshold of variability where data was collected on post-harvest units. Green replacement trees and downwood standards and guidelines are followed, but insufficient data was collected in 1997 to fully address downwood and replacement density.

Districts are still concerned about maintaining sufficient densities and size classes of dead standing and down wood in fuelwood harvest units. Past monitoring of repetitive fuelwood harvesting in popular sites has lead to localized reductions in snag and downwood densities. No firewood monitoring was reported in 1997.

Monitoring in 1997 showed that total required dead tree retention levels are being met.

Recommended Actions:
Continue monitoring with emphasis on review of post-harvest snag conditions, including densities of large trees, down logs and green tree retention. Monitoring of use of this habitat is still an ongoing need. Tentative results suggest additional work with Districts is needed throughout the operations process, with the intent to improve snag selection and placement in harvest units in order to minimize the lose of snags. In addition, snag densities after marking should exceed minimum levels in order to off-set anticipated losses resulting from activities.

UMATILLA MONITORING ITEM 28
Threatened/Endangered/Sensitive Wildlife and Fish Species

Questions:
Bald Eagles: *Are potential habitats, including nest sites, communal roosts, and associated foraging habitats being identified and planned to assure species recovery as specified in the Recovery Plans and in the Forest Plan? Are wintering populations stable or increasing?*
Peregrine Falcons: *Are nesting and associated foraging habitats being identified? Are potential nest habitats identified and being managed to maintain suitability?*
Chinook Salmon: *Are terms and conditions as identified by NFMS being followed?*
Sensitive Species: *Are potential habitats being identified and/or protected to maintain identified species and to insure management standards are being met?*

Bald Eagles
The Dry Creek (Rail Canyon) bald eagle nest was monitored in 1997. Numerous visits were made to the nest site starting in March and ending in July. Adults were observed on and around the nest in March and April. By the end of May, adult birds were seen perching >0.6 miles from the former nest site. The area was searched but no nests were discovered. This was the last observation of adult birds and no observations of chicks or fledged birds occurred in 1997. The assumption is that the Dry Creek nest failed or was abandoned in 1997.

Two winter bald eagle survey routes were run in 1996-1997, which followed the same routes used in the original study by Frank Issacs (1991-1992). Overall, the number of wintering bald eagles was consistent with past surveys. No evidence of new night roosts were found. No birds were detected after the end of March. No evidence of nesting or attempted nesting eagles was observed.

Peregrine Falcon
Aerial surveys for peregrine falcons occurred on the north and south portion of the Forest in 1997. Numerous sites were inventoried during the breeding season. No peregrines or potential nest sites were observed. However, incidental sightings occurred in August and September in the Asotin drainage and lower Grande Ronde drainage. None of these observations were verified. Potential nesting habitat for peregrine falcon was identified and rated on the Forest in 1991-1992.

Chinook Salmon
Information on salmon redd counts, as well as information regarding PACFISH implementation, may be found under Umatilla Monitoring Item 22.

Sensitive Species
During 1997, no report was submitted specific to the Forests's sensitive species.

Other Threatened and Endangered (T/E) species populations and their habitat were not compromised as a result of management activities on the Forest in 1997. Effects on T/E species and their habitat continues to be documented in the project Biological Evaluation and/or "Specialist Reports". T/E species and their habitats will continue to be analyzed on the Forest through the project evaluation process.

Recommended Action:

- Continue to monitor. Follow-up monitoring and documentation is needed for the Forest's sensitive species.
- Continue development of a site management plan for the Dry Creek (Rail Canyon) bald eagle nest site. A draft of the plan is anticipated by the summer of 1998 and a final plan in the fall.

UMATILLA MONITORING ITEM 29
Plant and Animal Diversity

Question: What are the trends in species diversity on the Forest?

This Monitoring Item was not scheduled for FY 97. However, the Monitoring Avian Productivity and Survivorship (MAPS) program gives some information regarding diversity of land birds on the Forest.

MAPS provides annual regional indices and estimates of adult populations size, post-fledgling productivity, adult survivorship, and recruitment into the adult population for various landbirds species. Although results for 1997 are not yet available, results of data collected in 1996 and previous years can be found in the 1996 Annual Report of The Monitoring Avian Productivity and Survivorship (MAPS) Program in Region 1 and Region 6 of the USDA Forest Service (Peter Pyle, D.R. O'Grady, and D.F. DeSante, The Institute For Bird Populations, Point Reyes Station, CA, June 26, 1997).

The MAPS program was initiated on the Forest in 1992 with 6 stations. The 6 stations were part of a regional effort to represent plant communities and successional stages in the Pacific Northwest. Table IV-13 lists the stations and habitats monitored on the Umatilla.

Table IV-13
PLANT COMMUNITIES AND SUCCESSIONAL STAGES FOR SIX MAPS STATIONS
Umatilla National Forest

Location	Station No.	General Habitat and Successional Stage	Elevation (ft)
Buzzard Creek	BUCR 151	Disturbed coniferous forest, successional alder scrub	5000
Brock Meadow	BRME 152	Montane meadow, coniferous forest, riparian willows	4000
Fry Meadow	FRME 153	Montane meadow, coniferous forest	4200
Coyote Ridge	CORI 154	Successional disturbed mixed coniferous forest	4400
Buck Mountain	BMME 155	Montane meadow, dense coniferous forest	4700
Phillips Creek	PHCR 156	Riparian willow/alder, dry chaparral, open mixed conifer/oak forest	3200

In 1996, species richness (number of species) was up from previous years with 47 species recorded for all stations. The number of species has been highly variable over the past 5 years, slowly increasing in recent years but still below the 1992 high. Coyote Ridge and Phillips Creek stations tend to have the highest species richness year after year. Table IV-14 displays the trends in species richness for the MAPS stations on the Umatilla over the past 5 years.

Table IV-14
TRENDS IN SPECIES RICHNESS AT SIX MAPS STATIONS
Umatilla National Forest

Year	BUCR 151	BRME 152	FRME 153	CORI 154	BMME 155	PHCR 156	Total
1992	28	27	23	31	29	32	49
1993	20	25	25	229	27	26	47
1994	24	25	25	30	32	29	43
1995	22	30	20	29	31	30	45
1996	22	27	21	34	28	32	47

The five most frequently captured species overall, (in decreasing order) were the dark-eyed junco, Mac Gillivray's warbler, Swainsons thrush, golden-crowned kinglet, Townsend's warbler, and ruby-crowned kinglet. As shown in Table IV-15, the most abundant breeding species at the six stations were Mac Gillivray's warbler, Swainsons thrush, Townsend's warbler, ruby-crowned kinglet, Lincoln's sparrow, and dark-eyed junco. Over the past 5 years, little difference exists among the most abundant breeding species on the Forest.

Table IV-15
MOST COMMON BREEDING SPECIES CAPTURED AT THE SIX MAPS STATIONS
(Species are Listed in Decreasing Order)
Umatilla National Forest

1992	1993	1994	1995	1996
Townsend's warbler	Mac Gillivray's warbler	golden-crowned kinglet	Mac Gillivray's warbler	Mac Gillivray's warbler
Mac Gillivray's warbler	dark-eyed junco	Mac Gillivray's warbler	Swainson's thrush	Swainson's thrush
Swainson's thrush	golden-crowned kinglet	dark-eyed junco	ruby-crowned kinglet	Townsend's warbler
dark-eyed junco	Townsend's warbler	Townsend's warbler	Townsend's warbler	ruby-crowned kinglet
yellow-rumped warbler	Swainson's thrush	ruby-crowned kinglet	Lincoln's sparrow	Lincoln's sparrow

As shown in Table IV-16, the 1996 bird capture is the lowest since the study began in 1992. The total adult population size in 1996 was greatest at Brock Meadow and Buck Mountain Meadow. As with previous years, the stations with the greatest amount of meadow habitat supported the greatest number of breeding adults. Overall, the breeding population on the Umatilla decreased in 1996.

Table IV-16
TRENDS IN MIST-NET CAPTURES - MAPS STATIONS
Umatilla National Forest

		MAPS Stations						
Component	Year	BUCR 151	BRME 152	FRME 153	CORI 154	BMME 155	PHCR 156	Total
Total Birds Captured	1992	-	-	-	-	-	-	2420
	1993	0	-	-	-	-	-	1620
	1994	218	292	138	280	514	253	1704
	1995	175	311	180	295	312	223	1496
	1996	186	291	155	227	310	220	1389
Adult Capture Rates*	1992	124	241	106	151	277	249	1148
	1993	107	208	115	157	242	192	1021
	1994	103	193	97	176	203	136	908
	1995	110	195	93	139	153	141	831
	1996	75	146	90	99	146	113	669
Young Capture Rates*	1992	267	444	282	182	445	111	1731
	1993	94	90	54	105	184	73	600
	1994	113	131	37	72	239	80	672
	1995	87	106	87	103	156	50	589
	1996	87	50	32	84	106	49	408

*Per 600 net-hours

Overall, productivity continued to be low on the Umatilla in 1996. Causes for declines in both breeding populations and productivity on the Forest have not been identified. Changes likely result from a combination of factors, including local and seasonal weather variables, recent and current population dynamics, and/or unidentified habitat features not considered in this study.

Point count survey data were not compiled for the six MAPS stations on the Umatilla in 1996.

Level II monitoring of Neotropical Migratory Birds (NTMB) in the Blue Mountains continued during 1996, to identify NTMB species use of the grand fir type, monitor their population trends, examine the relationships between species and the grand fir type, and refine the Regional approach for monitoring. Both the Umatilla and Wallowa-Whitman are part of the study. Data collection was initiated in 1992 and is expected to continue through 1997. Results have not been tallied for the past 4 years.

Recommended Action:
Continue monitoring through project conclusion in 2001.

UMATILLA MONITORING ITEM 39
Range Outputs

Question: *Are the outputs for permitted domestic livestock (Animal Unit Months [AUMs] being achieved as projected in the Forest Plan?*

The Forest Plan does not set specific target levels for outputs of permitted livestock AUMs. The plan indicates that forage will continue to increase in quantity as a result of improvement projects and range and timber management. Projected output within the first decade was estimated at 62,800 AUMs.

In 1997, there were 51,217 AUMs under Term Grazing Permit and an additional 1,093 AUMs under Term Private Land Permit (which authorize use on private land waived to the government for management) on the Forest. There were 4,058 AUMs in non-use.

Table IV-17
GRAZING USE - FY 1997
Umatilla National Forest

Forest Plan Level	Current Level	Current % of Forest Plan Level
58,000 AUMs (1991 level)	52,217 AUMs	88%
62,800 AUMs (projected level)	52,217 AUMs	81%

The level of permitted grazing is within the threshold of variability.

Recommended Action:
Continue to monitor.

UMATILLA MONITORING ITEM 44
Availability of Firewood

Questions: How much firewood is being provided? Is sufficient fuelwood being offered to the interested public?

In 1997, the Forest's firewood output was 5.2 mmbf (Million Board Feed), about 35 percent of Forest Plan projected output of 15 mmbf. Trends since the late 1980s show a slowly declining demand for firewood, with strong year-to-year variation. 1997 seemed to continue the general trend although total permits increased from 1996. Table IV-18 shows the firewood program trends from 1989 to 1997.

Table IV-18
FIREWOOD PROGRAM - CHARGE PERMITS ISSUED 1989-96
Umatilla National Forest

Year	Number	MMBF
1989	4,794	12.4
1990	3,871	8.0
1991	3,792	8.7
1992	2,838	6.8
1993	3,786	9.5
1994	2,373	5.5
1995	3,214	9.2
1996	2,115	5.9
1997	2,724	5.2

Current demand for firewood continues to be met from the Forest. Firewood demand is projected to remain near the average levels for the next few years. The Forest still anticipates a surplus of firewood for the next several years due to the high level of insect- and fire-killed timber, particularly on the south-end districts. However, the quality and quantity of the trees for firewood has been declining as the dead material deteriorates and some is removed in salvage sales.

Recommended Action:
Continue to monitor.

UMATILLA MONITORING ITEM 45
Mineral Development, Rehabilitation and Accessibility

Questions: *Are the standards and guidelines being implemented correctly? Are the standards and guidelines for mineral operations "reasonable" and effective in meeting Forest Plan goals? Is vehicle (potential) access to mineral (mining claims) or energy (gas and oil) lease sites being restricted?*

The Forest mineral activities occur on the North Fork John Day Ranger District with little occurring on the other three Districts. In 1997, the North Fork John Day Ranger District had 61 claims under Plans of Operation or Notices of Intent. Fifty-one claimants filed or phoned Notices that they were going to operate during the 1997 season. Of the total, 26 claims were worked during the 1997 season. All claims that were worked had ongoing reclamation work done during the mining operation.

All 61 claims were monitored for compliance. Reclamation monitoring was done on all work of the 26 Claimants that operated during the season. Findings include:

- Average disturbance was approximately .10 acre for 26 working claims or a total of 2.6 acres.
- All 2.6 acres were reclaimed and all reclaimed areas met objectives for reclamation.

The District received two new Plans of Operation during the 1997 field season. Both plans of operation will be processed during the winter of 1998. None of the Districts reported any active sites requiring access during FY 97.

Mineral inspections and reclamation reviews indicate that standards and guidelines are being met.

Recommended Action:
Continue monitoring active claims and permits. The North Fork John Day Ranger District has proposed five sites for reclamation projects. Monitoring will be needed when these ongoing projects have been funded and accomplished.

UMATILLA MONITORING ITEM 46
Forest Road System

Questions: Are the total miles and those useable by passenger cars and high clearance vehicles within Forest Plan projections? Is the Forest providing and managing the Forest road system to accomplish land and resource management objectives as outlined in the Forest Plan?

Based on the Umatilla's Forest Transportation Management System database, the current transportation information and road use status is as follows:

Table IV-19
FOREST ROAD SYSTEM
Umatilla National Forest

Road System	Maintenance Level	1996 Miles	1997 Miles
Closed Road	1	2,643	2,364
High Clearance	2	1,733	1,960
Passenger Car	3	491	498
Passenger Car	4	177	177
Passenger Car	5	147	78
Total Open		2,479	2,713
Total Road		5,122	5,120

Although little actual change in roads occurred from last year, some adjustments in the database resulted in changes to the Forest totals. Currently, the total passenger car mileage amounts to 753 miles or about 84% of the Forest Plan projection (900 miles); high clearance miles total 1,960 miles or about 77% of the Forest Plan estimate (2,530 mile). The Forest has reduced total open miles and increased closures by about 30% (compared with Forest Plan expectations), primarily due to a relatively assertive road closure program, and in part to more accurate information about the road system. The Forest Plan also projected an increase in newly constructed mileage (mostly local roads) to meet planned resource objectives. This projection has never materialized.

District Motorized Access and Travel Management Plans have been essentially implemented on the Forest. Minor adjustments will continue to be made. During 1997, only about 0.6 miles were reported as obliterated, and no additional roads were reported as closed.

Although total miles, specific road use types, and road construction levels are less than Forest Plan projections, the current road system appears to be meeting public and resource management needs. The level of resource management, project activities and public use appear to be occurring satisfactorily within the Forests road management framework.

Recommended Action:
Monitoring of the Forest road system in the future could place more focus on addressing all of the resource objectives.

UMATILLA MONITORING ITEM 49
Fire - Program Effectiveness

Questions: *Are fire programs (i.e. prevention, detection, suppression) meeting the standards as required by the National Forest Management Act? Are these programs being effective? What is the number of fires, by cause and acres burned, plus the actual expenditure of EFFS dollars?*

Although the number of wildfires was below average during the 1997 fire season (Calendar Year), the total acres burned was above average. The vast majority of the acres burned were associated with human-start situations. Table IV-20 exhibits the total number of human- and lightning-caused fires and acres burned for the Forest.

Table IV-20
LIGHTNING, HUMAN CAUSED FIRES AND ACRES BURNED 1991-1997
Umatilla National Forest

Fire Cause	1991	1992	1993	1994	1995	1996	1997
Human-Caused:							
Total Number of Fires	52	53	71	45	16	32	45
Total Acres Burned	29	156	635	153	7	8,289	3,281
Lightning-Caused							
Total Number of Fires	93	137	20	201	82	97	70
Total Acres Burned	49	278	3	5,637	131	64,228	37
Forest Totals:							
Number of Fires	145	190	91	246	98	129	115
Acres Burned	78	435	638	5,793	138	72,517	3,318

The total number of fires in 1997 represents 74% of the 10-year (1987-96) average of 155. When comparing the total number of lighting fires in 1997 to the 10-year lightning average (same period), the 1997 level was 67% of the average. Human-caused fires were 88% of the human-caused average. The total acres burned in 1997 represents 234% of the base period average (1991-1995) of 1,416 acres. The large increase was due to two large human-caused wildfires, Star and Milepost 248.

Table IV-21 shows estimated expenditures of WFSU (Wildfire Suppression and Rehabilitation Funds) in FY1997. Final payments still being resolved on contested payments.

Table IV-21
ACTUAL EXPENDITURES OF WFSU - CY 1991 to 1997 ($97)
Umatilla National Forest

Year	1991	1992	1993	1994	1995	1996	1997
Total Expenditure	$625,527	$1,662,787	$1,179,212	$4,131,005	$1,682,486	$29,877,095	$2,205,646

Recommended Action:
Continue to monitor.

UMATILLA MONITORING ITEM 53
National Environmental Policy Act (NEPA) and National Forest Management Act (NFMA)

Questions: *Are project-level decisions made using appropriate NEPA/NFMA procedures including analysis of cumulative effects? Are project level decisions tiered to, and in accord with, the Forest Plan?*

The number of environmental documents prepared in fiscal year (FY) 1997 was similar to the number prepared in FY 1996. This FY, one environmental impact statement (EIS), 10 environmental assessments (EA) and 44 categorical exclusions (CEs) were prepared on the Umatilla. All of the EAs and 19 of the CEs were for salvage timber sales. Three of the salvage sale EAs fell under the authority of the Rescission Act. Signed by the President in July 1995, the Act expired on December 31, 1996. It directed the preparation, advertisement, offer and award of contract for salvage timber sales using expedited procedures. The remainder of the salvage projects were developed under the normal administrative rules.

One Record of Decision was written for an EIS, which included documentation for Oil and Gas leasing on the Umatilla and Malheur National Forests. The non-timber sale CEs covered a wide range of activities.

One formal NEPA/NFMA compliance review was completed by the Forest ID team this FY. This was a review of the draft EA for the Big Tower Salvage and Revegetation Project. As a result of the review, the EA was re-written before being sent to the public. In addition, several less formal reviews by District NEPA Coordinators and District Management Teams as well as S.O. Staff were conducted. Generally it was found that all NEPA requirements were being met.

Several Forest CEs and one EA were informally reviewed as part of the coordinated tri-Forest field monitoring effort. Several concerns regarding the NEPA documentation for these projects were noted. In some cases, adequate scoping was apparently not completed for some of the CEs. Also, concern was expressed that the site-specific disclosures required by NEPA were not always well documented.

Recommended Action:

- Evaluate the need to issue a new Forest White Paper to re-initiate standard NEPA review and other procedures.
- Work with the Malheur and Wallowa-Whitman Forests to provide special NEPA training opportunities during FY 1998.

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Table IV-22
FOREST ACCOMPLISHMENTS - FY97
Umatilla National Forest

The following table provides a summary of selected Forest accomplishments and resource outputs for FY97. Where possible, these are compared to Forest Plan estimates, but in many of the cases the unit of measure has changed since the Forest plan was completed and direct comparison is no longer possible.

RESOURCE ACTIVITY/OUTPUT	UNIT OF MEASURE	FOREST PLAN PROJECTION (avg/year)	ACTUAL FY97 FOREST OUTPUT	% ACTUAL TO FOREST PLAN
FIRE				
Natural Fuel Treatment	M Acres	3.4	13.0	382%
Activity Fuel Treatment	M Acres	5.8	1.9	33%
FISH				
Anadromous Stream Restored/Enhanced	Miles	Not Specified	44	NA
Inland Stream Restored/Enhanced	Miles	Not Specified	1	NA
RANGE				
Permitted Grazing - Sheep & Goats	*	58.0 M AUMs	30.3 M Head Months	*
- Cattle & Horses	*	(total)	28.7 M Head Months	*
Non-structural Improvements	Acres	Not Specified	2,925	NA
Structural Improvements	Structures	Not Specified	45	NA
Noxious Weed Treatment	Acres	Not Specified	4,341 gross	NA
RECREATION				
Trail Construction/Reconstruction	Miles	30	5	16%
Developed Recreation Capacity	M PAOTs	255	702	275%
ROADS				
Construction	Miles	92	0	0
Reconstruction	Miles	94	46	49%
Obliteration	Miles	Not Specified	0.6	NA
THREATENED, ENDANGERED, and SENSITIVE SPECIES				
Aquatic Habitat Restored/Enhanced	Miles	Not Specified	2.0	NA
Terrestrial Habitat Restored/Enhanced	Acres	Not Specified	14.0	NA
TIMBER				
Total Program Sale Quantity	MMBF	159	82	52%
Reforestation	Acres	7,500	8,300	111%
Timber Stand Improvement	Acres	2,900	2,900	100%
WILDLIFE				
Habitat Restored/Enhanced	Acres	10,000	3,950	40%
Habitat Structures	Structures	75	91	121%
WATER				
Watershed Improvements	Acres	454	208	46%

* Unit of measure changed between FY90 Forest Plan and FY97 Accomplishment Report.

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FOREST PLAN AMENDMENTS

Only one non-significant Forest Plan Amendment was prepared on the Umatilla National Forest in FY 97.

Amendment Number	Date	Summary and Comments
20	9/8/97	Exempts Big Tower Salvage and Restoration Project from certain Forest Plan standards in order to facilitate restoration work.

SECTION 5:

WALLOWA-WHITMAN NATIONAL FOREST

Blue Mountain Forests' Monitoring Report - FY 97
Section 5 - Wallowa-Whitman National Forest

TABLE OF CONTENTS

LIST OF TABLES

MONITORING ITEMS NOT REPORTED FOR FY 97

A few of the Monitoring Items from the Wallowa-Whitman's 1991 Monitoring Implementation Plan are not reported in FY 97. Some items only need to be reported every few years in order to detect trends. Some items were purposely deferred pending updated monitoring protocols or direction. Others were scheduled for monitoring in FY 97 but were not reported.

Monitoring Items that were deferred or not reported include the following:

Item 1	Compliance with NEPA and the Forest Plan
Item 7	Harvest Units
Item 9	Lands Not Suitable for Timber Management
Item 36	MacFarlane's Four O'Clock
Item 37	Greenman's Lomatium
Item 43	Visuals
Item 48	Adjacent Lands

The Summary Of Recommended Actions, beginning on page 5-3, shows all Wallowa-Whitman Monitoring Items and whether they were deferred, not reported, consolidated with the other Blue Mountain Forests (Section 2 of this Monitoring Report), or reported in this Section.

SUMMARY OF FINDINGS AND ACTIONS TO BE TAKEN

The table on the following pages summarizes for the Wallowa-Whitman National Forest the key findings and the recommended actions to be taken as a result of this year's monitoring. A more complete discussion of each monitoring item may be found in later in this section or in the Coordinated Monitoring Section (Sec. 2).

It is assumed that monitoring will be continued with all monitoring items in the future, although not all will be reported every year. Three other categories of action are identified in the table as follows:

Change Practices (CP) - Indicates that the results of current practices are outside the thresholds of variability and/or are not meeting specific direction set by the Forest Plan. A change in practice or procedure may be needed.

Further Evaluation (FE) - Indicates that results may or may not have exceeded the threshold of variability, but additional information or evaluation is needed to better identify the cause of the concern and/or determine future actions.

Amend Forest Plan (AP) - Indicates that results are inconsistent with the Forest Plan, or the Forest Plan direction was not clear. The Forest Plan may need changing or clarifying through the amendment or revision process.

Summary of Recommended Action

♦ 1997 **Monitoring Report** ♦

Wallowa-Whitman National Forest

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
DEF	1	Compliance with NEPA and Forest Plan	CP/FE				Deferred for FY 97.
W-W	2	Forest Plan Standards and Guidelines	CP				S&G checklists no longer needed or required. Tri-Forest field reviews indicate most standards are being followed.
COORD	3	Insect and Disease Management	FE/AP				Insect populations down substantially from the early 1990s. Current trend towards unevenage management could increase insects and disease in the future.
COORD	4	Timber Offered for Sale	FE/AP		X	X	Timber offered remains far below ASQ and TPSQ from the Forest Plan. Adjustments will be necessary following completion of ICBEMP analysis.
COORD	5	Silvicultural Harvest Methods	FE/AP		X	X	Harvest methods continue to shift towards unevenage management and commercial thinning; total harvest acreage is below Forest Plan threshold. Adjustments will be necessary following the completion of ICBEMP.
Accomp Report	6	Precommercial Thinning	CM				Reported in Accomplishment Table V-7.
DEF	7	Harvest Unit	CM				Deferred until FY 99.
COORD	8	Reforestation	FE				First-year survival at 88%, an improvement from last year's 75%. A large number of acres are not satisfactorily restocked after 5 years; most of this is attributable to grass seeding as part of wildfire rehab efforts.
DEF	9	Lands Not Suitable for Timber Management	FE				Deferred for FY 97.
W-W	10	Vegetation Management	CM		X		Herbicide use showed slight increase as backlogged areas are addressed. Need to evaluate increased emphasis on ecosystem prescribed fire in light of Veg Mgt EIS goal to rely less on burning.

REPORT SECTION:
DEF - Deferred this FY
W-W - Reported in the Wallowa-Whitman Section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue Monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
W-W	11	Transportation	CP,/FE AP		X	X	Given current funding levels, the Forest is unlikely to meet road density goals by the end of the decade.
Accomp Report	12	Range Outputs	CM				Reported in Accomplishment Table V-7.
COORD	13	Forage Utilization	FE	X			90% of monitored pastures met standards; only high priority allotments were monitored. Need to continue emphasis on riparian monitoring.
W-W	14	Range Vegetative Condition	CM				Need to report upland and riparian rangeland separately. Need a process to define riparian conditions.
Accomp Report	15	Range Improvements	CM				Reported in Accomplishment Table V-7.
COORD	16	Forage Utilization	CP/FE AP	X	X	X	The Forest completed 4 AMPs but no NEPA documents; the Forest is currently behind schedule, exceeding the threshold.The Forest is behind schedule for updating AMPS and NEPA, exceeding the threshold.
COORD	17	Noxious Weeds	CM				The Forest treated about 1200 acres in FY97, by manual and chemical means. Results are acceptable, but the Noxious Weed EA needs to be updated to address new sites.
W-W	18	Watershed Standards, Guidelines, and BMPs	CM				Most watershed S&G are being implemented as designed; continue to monitor.
W-W	19	Riparian Area Cumulative Effects	CM				Long-term studies have been initiated, but it is too early for results. Continue to monitor.
W-W	20	Peak Flow/Low Flow Cumulative Effects	CM	X			All projects were designed and planned to be within desired ranges of variability. No peakflow or lowflow studies were conducted this FY. Need to revise the protocol for peak flow cumulative effects analysis.
W-W	21	Soil Productivity	CP	X		X	Most projects are meeting soils S&G. Long-term studies include the Limber Jim and Hungry Bob projects, and Research is looking at erosion on the Twin Lakes fire. Need to update/refine soil S&Gs, as well as monitoring procedures for field personnel.
W-W	22	Air Quallity	CP	X			Cooperative monitoring has now been extended into the all burning period. Prescribed burning was halted in Dec '97 when the burning cap was reached for NE Oregon Forests. Need increased coordination between Forests.

REPORT SECTION:
DEF - Deferred this FY
W-W - Reported in the Wallowa-Whitman Section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue Monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
W-W	23	Fisheries Habitat	CM				The Forest accomplished a number of fish habitat projects, although some were postponed due to budgets. Continue to monitor.
W-W	24	Anadromous Fisheries Consultation	CM				Terms and conditions of Section 7 BOs are being met; continue to monitor.
W-W	25	Coulumbia River PIG, PACFISH, and INFISH	CM				Most DFCs and stream inventorys for the PIG have been completed. 57 BEs were completed for PACFISH projects, 45 BEs were completed for INFISH projects. Continue to monitor.
W-W	26	Salmon Summit Action Plan Commitments	CM				Out of 99 miles of stream surveyed, 83% were at PFC or on an increasing trend. Camp Creek mining site was restored. Temperance Creek is the last steam requiring diversion screening; consultation is in progress.
W-W	27	Old Growth	FE/AP		X	X	Only 30% of designated old growth MA15 meets Regional old growth definitions. This has already been submitted to the Regional Forester as a potential issue for Forest Plan Adjustment. Continue to protect old growth per RF's Amendment #2.
W-W	28	Dead and Defective Tree Habitat and Primary Cavity Excavators	CP/FE AP	X	X	X	Less than 50% of the acres surveyed in timber sales met the snag level necessary for 100% potential population levels.
W-W	29	Pileated Woodpecker	FE		X		No sampling occurred in FY 97. Habitat and populations need to be identified if this is to remain a Management Indicator Species.
W-W	30	Goshawk Populations	FE	X			Very poor goshawk productivity in FY 97; this is probably attributable to bad weather. Need to survey all timber sales before altering potential habitat.
W-W	31	Pine Marten Populations	CM		X		La Grande conducted winter track surveys; 16 marten were detected in exclusively mature and late sucessinal forests. Available data is inadequate to address the monitoring questions.
W-W	32	Elk Habitat/Populations	CP/FE AP	X	X	X	Only 6 of 10 projects met the HEI objective of 0.5. Elk numbers remain below management objectives.
W-W	33	Bald Eagles	CP	X			The Baker nest site produced two young; the Unity site was abandoned again. Nest and roost sites are being protected, but management plans need to be completed.

REPORT SECTION:
DEF - Deferred this FY
W-W - Reported in the Wallowa-Whitman Section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue Monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

Report Section	MI#	Monitoring Item (MI)	1996 Action	1997 Recommended Action			Remarks
				Change Practice	Further Eval.	Amend Forest Plan	
W-W	34	Peregrine Falcons	CM				Three nests produced five fledglings. Need to complete mgt plans for the nest sites.
W-W	35	Sensitive Species	CM				Protection of TES species is being addressed through project BEs. Inventories and populations are lacking, so overall species viability cannot be addressed with species mgt. guides.
W-W	36	MacFarlane's Four-O'Clock	CM				Not reported in FY97.
W-W	37	Greenman's Lomatium	CM				Not reported in FY 97.
W-W	38	Minerals	FE/AP		X	X	The ongoing concern of possible conflicts between the mining law and short-term S&Gs and objectives has been submitted to the Regional Forester as a potential issue to be addressed during Plan adjustment.
W-W	39	Wilderness	CM				Wildernesses are generally be managed according to management direction and provisions of the Wilderness Act.
W-W	40	Wild and Scenic Rivers	CM				Wild and Scenic Rivers are generally being managed to meet meet direction and the law. Illegal mining in the North Fork John Day may require increased law enforcement.
W-W	41	Recreation Setting	CM				The Forest is offering a wide range of opportunities to the general satisfaction of users.
W-W	42	Off-Road Vehicle Use	FE				ORV use is slowly increasing, but generally meeting the intent of S&Gs.
DEF	43	Visual Resource Objectives	CM				Deferred for FY 97.
W-W	44	Cultural and Historic Resource Sites	CM				None of the 446 sites monitored were impacted by current activities.
COORD	45	Budget	CP/FE				The Forest budget is down 14% from Forest Plan projections, within the threshold of variability.
COORD	46	Costs and Values	CP/FE AP		X	X	The Forest showed great increases in timber unit values and unit costs, although volume has declined. Forage value has gone down 22%. Recreation, Fish, and wildlife values have not changed since 1990.
COORD	47	Community Effects	FE/AP				Payments to counties down 76% (Whitman) to 90% (Wallowa) from Forest Plan projections. Employment down 2% while income is down 12% from projected.
COORD	48	Adjacent Lands	FE/AP				Deferred for FY 97.

REPORT SECTION:
DEF - Deferred this FY
W-W - Reported in the Wallowa-Whitman Section
COORD - Reported with Coordinated Monitoring (Sec. 2)

RECOMMENDED ACTION:
CM - Continue Monitoring
CP - Change Practices
FE - Further Evaluation
AP - Amend Forest Plan

W-W MONITORING ITEM 2
Forest Plan Standards And Guidelines

Purpose: To determine if applicable S&Gs from the Forest Plan are correctly and consistently implemented on individual projects.

Standard and Guide (S&G) checklists are no longer required for project-level EAs, EISs, or decision memorandums. Six years of monitoring has indicated that project-level planning teams understand Forest Plan S&Gs. Questions still arise concerning the intent of particular direction, primarily interim direction. These questions are answered by Forest and Regional Office staff and are sent to all units for consistent understanding of varied situations.

Some field monitoring of S&G was conducted by tri-Forest Monitoring Teams during FY 97. These field reviews focused on implementation monitoring of randomly-selected Rescission Sales. More information on these tri-Forest reviews may be found under the Special Focus Item in Section 2 of this report.

Recommended Action:
Continue to monitor.

W-W MONITORING ITEM 10
Vegetation Management

Purpose: To determine if vegetation management is effective in achieving resource management goals and to determine if there is a reduction in the need for vegetation treatments, particularly the application of herbicides and prescribed burning.

The final version of the Forest's "Monitoring Guide for Vegetation Management Activities" was approved and published in June of 1993. The guide initiates a process to assure compliance with Forest Plan goals and the Vegetation Management Final EIS and its associated Mediated Agreement.

Accomplishment data has been collected as required by the guide for the past six years and is displayed in the following tables. Table V-1 displays treatment methods by activity type. Table V-2 compares the herbicide and prescribed fire activities to the total program, revealing an increase in herbicide use, and a decrease in prescribed fire activities from 1992 to 1997. Herbicide treatments will probably continue at a low level for the next few years while a backlog of difficult non-stocked sites are reforested and a more intensive noxious weed control program is conducted. The level of prescribed fire activity is uncertain based on the perceived need to increase this activity Forest-wide for ecosystem management needs, but at the same time follow the Environmental Protection Agency's recommended Air Quality Standards.

Table V-1
ACRES TREATED BY VARIOUS VEGETATION MANAGEMENT METHODS
Wallowa-Whitman National Forest

Activity	Manual	Mechanical	Biological	Rx Fire	Chemical	Total
Silviculture						
REF Site Prep	993	225	0	944	927	3,089
TSI Release	555	0	0	24	0	579
Tree Genetics	6	310	0	0	16	332
Research	0	0	0	0	0	0
Facilities Mtnc.						
Rec Sites	0	0	0	0	0	0
Admin Sites	0	11	0	0	10	21
Range Improvement	0	0	45	0	0	45
Noxious Weeds	312	0	43	0	851	1,206
Wildlife Habitat Improvement	20	0	200	3,046	0	3,266
Right-of-way mtnc.						
Roads	1	91	0	0	0	92
Trails	26	0	0	0	0	26
Special Uses	2	0	0	0	0	2
Easements	0	0	0	0	0	0
Utility Corridors	0	0	0	0	0	0
TOTAL ACRES	1,915	637	288	4,014	1,804	8,658
% by Treatment	22%	8%	3%	46%	21%	100%

Table V-2
ACRES TREATED WITH HERBICIDES AND PRESCRIBED FIRE
Wallowa-Whitman National Forest

Fiscal Year	Total Acres Treated	Treated with Herbicides		Treated with Prescribed Fire	
		Acres	% of Total	Acres	% of Total
1992	29,925	721	2%	17,455	58%
1993	9,698	972	10%	5,525	57%
1994	9,945	1,338	13%	5,201	52%
1995	9,089	1,654	18%	2,781	31%
1996	8,974	1,773	20%	3,643	41%
1997	8,658	1,804	21%	4,014	46%

Recommended Action:

- Continue to monitor according to the procedure outlined in the Forest's "Monitoring Guide for Vegetation Management Activities".
- Analyze the goals and objectives of prescribed fire in ecosystem management in light of the recommendations in the "Eastside Forest Ecosystem Health Assessment," and the "Blue Mountains Ecosystem Restoration Strategy".

W-W MONITORING ITEM 11
Transportation System

Purposes: *To verify that progress is being made toward meeting the open road density guidelines established in the Forest Plan . Once open road densities are reduced to Forest Plan levels, monitoring will be continued to assure that road densities described by the Forest Plan are maintained. To determine whether road barriers (earth berms, guard rail barriers, etc) are effective in keeping vehicles off blocked roads so that objectives of the Forest Plan can be met. Additionally, to determine which barriers are most cost-effective.*

Table V-3 shows an estimate of road miles relative to Forest Plan guidelines. Progress has been made toward closing roads, and additional closures are planned for Fiscal Year 1998. Considerable work remains to be completed.

Table V-3
MILES TO CLOSE TO MEET OPEN ROAD DENSITIES
Wallowa-Whitman National Forest

DISTRICT	1991	1992	1993	1994	1995	1996	1997
Baker	565	350	350	25	0	0	0
Pine	261	261	261	153	153	153	153
Unity	214	214	214	60	60	60	60
La Grande	1131	1074	955	832	553	419	394
Wallowa Valley	586	525	472	431	410	404	404
Eagle Cap	20	15	15	12	12	12	12
TOTAL	2777	2439	2267	1513	1188	1048	1023

The above table assumes that attempted closures were effective. Effectiveness of closures is 50% or lower in some areas or with some methodologies. See Table V-4, on the next page.

Although the above table shows that additional closures are needed to meet open road density objectives on the Eagle Cap Ranger District, the District has completed implementation of its access and travel management plan; closure of any additional roads would result in closing roads necessary for public and administrative access.

The status on the Burnt Powder Engineering Zone (Pine, Unity, and Baker Districts) is essentially unchanged. La Grande Ranger District made some progress this year. Wallowa Valley has plans for road closures in 1998 in conjunction with timber sales.

The accuracy of the density calculations should improve this next year as GIS transportation system nears completion.

The Districts are continuing to implement road closures as funding allows. However, it is unlikely that the Forest will meet Forest Plan road density levels by the end of the decade, given the current and projected funding levels.

Table V-4
1997 ROAD CLOSURE EFFECTIVENESS SUMMARY
Wallowa-Whitman National Forest

DISTRICT	Earth Barrier		Gate/Guardrail		Camouflage/Natural	
	# of rds checked	Effective-ness	# of rds checked	Effective-ness	# of rds checked	Effective-ness
La Grande	113	92%	35	83%	4	100%
Pine	43	95%	3	0%	0	NA
Unity	38	74%	9	11%	0	NA
Wallowa Valley	16	75%	0	NA	8	63%
TOTAL	210	88%	16	6%	12	75%

Earth berms and camouflage/natural barriers both had a high degree of effectiveness when properly located and constructed. Gates are less effective and are expensive to maintain, so they should only be used where the benefit is worth the extra cost.

On the Wallowa Valley District, four of the sixteen roads evaluated had some use by standard vehicles. However, the District feels that management objectives are still being met in each of these cases. On the La Grande District, six of the nine roads where the berms had been breached were still meeting management objectives.

Recommended Action:

- Continue to monitor.
- Continue to pursue all possible avenues to manage restriction decisions.
- Re-visit road density standards and guidelines during the Forest Plan adjustment process.
- Legally close and enforce closures on roads with locked gates, rails, earth berms, or signs.

W-W MONITORING ITEM 14
Range Vegetative Conditions

Purpose: To ensure that suitable primary and secondary ranges are in satisfactory condition with a stable or upward trend.

This was not a required monitoring element for FY 97, but the information was available so it is documented here.

As forage condition and trend information is long-term monitoring, it is necessary to compare current data with historical data. The process includes re-analysis of long-term monitoring plots as well as comparisons of apparent condition and trend. Apparent condition and trend is based on a comparison of the existing plant community with the potential plant community.

From FY 91 through FY 97, condition and trend data has been collected on a total of 34 allotments. To date, only a portion of the analyzed allotments have had their data installed into a database system. Therefore, some data is not yet available for inclusion in this report.

Of the 22 allotments that have had their field data summarized, a total of 321,190 acres have been inventoried as shown in Table V-5.

Table V-5
RANGE INVENTORY AND CONDITIONS
Wallowa-Whitman National Forest

	Forest Plan Standards	
	Met	Not Met
Suitable Primary and Secondary Range	159,496	13,815
Transitory Range	18,757	0
Non-Range	32,674	0
Unsuitable Range	96,448	0
TOTALS	307,375	13,815

Of the suitable and secondary range alone, 92% of the acres meet the current Forest Plan standard of Fair forage condition with a stable trend or better. Only 8% of the acres do not meet this standard.

Inclusion of non-range, transitory and unsuitable range observations indicate that these acreages generally meet the standards for forage condition and trend. Given this, within the total allotment acreage analyzed, 96% of the acres meet the standard and only 4% do not.

The current pace of analysis is inadequate to ensure AMP planning on schedule. The shortfall directly relates to inadequate funding.

Monitoring results indicate that range forage conditions overall are well within the threshold of variability.

There is a long-term continuing need to define and implement a standardized riparian monitoring process that can identify "conditions" and relate them to impacting activities.

Recommended Action:

- Continue to monitor.
- When processes allow, report findings on riparian rangeland and upland rangeland separately in order to provide a better link to other monitoring items. Establish processes to define riparian "condition".
- Develop process to allow for reporting of currently existing riparian data.

W-W MONITORING ITEM 18
Watershed Standards, Guidelines, And Best Management Practices

Purposes: *To determine if watershed S&Gs and BMPs are being properly implemented within each project area. To determine if Forest Plan S&Gs and BMPs are effective in meeting project objectives and State water quality standards.*

Monitoring implementation of watershed standards and guidelines (S&G) and Best Management Practices (BMPs) occurred at three levels.

Level 1 Implementation Monitoring occurred during the planning phase of a number of projects to determine if S&Gs and BMPs were considered and incorporated in project design. A variety of management activities were monitored including timber sales, timber stand improvement projects, range allotments, recreation developments, stream restoration and enhancement projects, and mining activities.

The La Grande District implemented watershed S&Gs (including PACFISH and INFISH) on two timber sales (Green Pelican, Little Bear), one prescribed burn (Angel Point), and three restoration projects (UGR structure diversity, GRR whole tree, and Camp 1 restoration).

The Wallowa Mountain Zone implemented watershed S&Gs on a variety of projects including timber sales (Hotel, Haypen, Knucklehead), a variety of thinning and release projects, Crow Creek Bridge, Marr Flat AMP, Little Sheep Creek Hydroelectric Plant, 3 small salvage sales, Lostine campsite restoration, and the Imnaha natural fuels project.

Level 2 Implementation Monitoring occurred during contract/permit administration phase to determine if watershed S&Gs and BMPs were implemented. All active projects on all Districts were monitored by timber sale administrators, project managers, or contracting officer's representatives. Immediate corrective action was taken where S&Gs were not being met or BMPs were being improperly implemented.

In FY97, there was no formalized process for documenting Level 1 or 2 Implementation Monitoring on the Forest. Information is contained in individual project records.

Level 3 Implementation Monitoring occurred during post-project field reviews by interdisciplinary teams staffed by personnel from the three Blue Mountain National Forests. These teams reviewed 4 projects on the Wallowa-Whitman NF (2-Pine District, 1-Wallowa Valley District, 1-La Grande District) to determine if watershed S&Gs were implemented. Additional projects were monitored by District staff using a standardized process for the three Blue Mountain Forests.

Level 3 Implementation monitoring occurred on Bear Scatter Salvage, Red Pine, Little Eagle, Boundary Fire Salvage, Dark Horn, Texas Heat Natural Fuels, Biomass, Lower Montane, Curran, Crunch, Ironside Fire Salvage, and Three Cent.

In general, watershed standards, guidelines, and BMPs were implemented as designed. On the Little Eagle Sale, RCHA boundaries were not implemented properly on all units. One used a road as a boundary while several springs had smaller buffers than those called for.

Other Level 3 Implementation monitoring included District road closure program (La Grande), and Eagle Cap/Lostine campsite stabilization (Eagle Cap District).

All Districts continued stream temperature, turbidity, and suspended sediment measurements described in the 1995 Forest Plan Monitoring Report. Wallowa Valley, Pine, Unity, and La Grande RDs continued to measure stream discharge at gauging stations and by other means.

Formalized effectiveness monitoring was also conducted on the same array of projects described under Level 3 Implementation Monitoring. All activities and practices were effective in meeting water quality objectives.

The La Grande District continued to monitor 35 water temperature sites, and suspended sediment monitoring was completed on three sites. Stream discharge is monitored at 5 sites by gauging stations and at an additional 12 stage locations with pressure transducers. Pine District conducted stream temperature monitoring at 14 sites. Wallowa Mountain Zone conducted temperature monitoring at 27 locations during the year. Turbidity and suspended sediment monitoring was conducted in Gumboot Creek and the Imnaha River. Effectiveness of large wood placement in Class III and IV channels was also monitored.

Recommended Actions:

- Continue interdisciplinary team follow-up of selected projects based on major resource issues to ensure proper implementation and interpretation of watershed S&Gs and BMPs.
- Continue monitoring program as needed to establish baselines and determine trends.
- Expand program as budgets permit.

W-W MONITORING ITEM 19
Riparian Area Cumulative Effects

Purpose: To determine if desirable riparian vegetation and stream channel characteristics of riparian and aquatic ecosystems are being maintained over the long term, or if in poor condition, are being improved after proper implementation of appropriate S&Gs and BMPs.

This monitoring item requires installation and measurement of long-term projects to collect baseline and trend data. Most Districts either began or continued long-term monitoring projects. These consisted primarily of riparian area exclosures or stream channel stability monitoring.

The Wallowa Mountain Zone monitored over 46 miles of streamside exclosure and 65 upland spring/seep exclosures for effectiveness. Effectiveness of instream structures was monitored on Chesnimnus Creek. Riparian enhancement projects (shrub and conifer plantings) were monitored in several areas, most notably in the Upper Imnaha Drainage. Channel stability reference cross sections were established in Rich Creek and Shadow Canyon.

The La Grande District established three additional reference sites in McCoy, Little Indian, and Clark Creeks to assess long-term impacts on channel conditions and riparian vegetation and to determine natural rates of recovery. Sites installed in 1995 will be resurveyed in 1998.

Two new long-term photographic monitoring stations were established on Pine District at the Beecher Flat erosion control project. No previously established sites were revisited. All photo points are to be revisited in FY 98 (31 photo points at 5 project locations).

Recommended Action:
Continue to monitor.

W-W MONITORING ITEM 20
Peak Flow/Low Flow Cumulative Effects

Purposes: *To determine if S&Gs and BMPs that may affect peak and low streamflow are being properly implemented within each project area. To determine if S&Gs and BMPs are effective in meeting project objectives for peak and low streamflows. To determine if streamflow models being used on the Forest accurately predict peak and low flow events in watersheds with differing hydrologic regimes and management systems.*

All projects were designed and planned to be within desired ranges of variability. During 1997, timber management projects consisted primarily of commercial thinnings or density management of fire- or beetle-killed stands. Stream peak and low flow S&Gs and BMPs were considered along with cumulative effects during the planning process for all projects.

Level 1 Implementation Monitoring occurred during the planning phase of of a number of projects to determine if S&Gs and BMPs were considered and incorporated in project design. A variety of management activities were monitored.

Baker District monitored the following timber sales during FY 97: Lower Montane (active), Rusty Bull (sold/inactive), Union/Deer/Miners (planning completed, EA signed). These sales were planned with flow effects taken into consideration. ECA models in conjunction with Section 7 risk ratings were used to prevent risk from moving into higher categories. The Rusty Bull EA dropped a unit to meet this objective. Wallowa Mountain Zone monitored the same projects described under Item 18.

Level 2 Implementation Monitoring occurred during contract/permit administration phase to determine if watershed S&Gs and BMPs were implemented. All active projects on all Districts were monitored by timber sale administrators, project managers, or contracting officer's representatives. Immediate corrective action was taken where S&Gs and BMPs were not being met or BMPs were being improperly implemented.

Level 3 Implementation Monitoring occurred during post-project field reviews by interdisciplinary teams staffed by personnel from the three Blue Mountain National Forests. Additional projects were monitored by District staff using a standardized process for the three Blue Mountain National Forests (same projects as described under Monitoring Item 18).

Peak Streamflow: Immediate evaluation and appropriate corrective action are required under this monitoring item when a short- or long-term study or validated model shows (1) that vegetation management activities are not being patterned and scheduled to minimize the potential for adverse cumulative change in peak streamflow, including quantity, duration, or timing of peak streamflow, or (2) in watersheds where vegetation management activities are influencing peak flows, channel stability is not maintained at 100 percent of potential. Thresholds for stream channel instability vary by channel type and are not defined at this time relative to clearcut equivalency or other factors. The threshold range for clearcut equivalency is probably between 15 and 33 percent. Corrective action may include development and implementation of new BMPs.

Low Streamflow: Immediate evaluation and appropriate corrective action are required under this monitoring item when a short- or long-term study or validated model shows that vegetation management activities, out of streamwater uses, or other activities have reduced streamflow during May through September. This may include quantity, duration, and timing.

No specific peakflow or lowflow studies were conducted in 1997. Permanent stream channel cross sections have been established on a number of Forest streams to monitor long-term trends in channel conditions, such as sediment, aggradation, and degradation.

Recommended Action:

- Continue to establish and/or read transects. Analyze and report results.
- Revise the protocol for peak flow/stream channel cumulative effects analysis. Current protocol (WWPEAK) is cumbersome to use and underlying assumptions make interpretation difficult.

W-W MONITORING ITEM 21
Soil Productivity

Purposes: *To determine if soil productivity S&Gs are being implemented, especially the standard which limits detrimental soil conditions within each activity area, including system roads and landings, to no more than 20 percent of activity area acreage. To determine if soil productivity S&Gs , and accepted soil management practices that are believed to achieve soil productivity S&G , are effective methods for maintaining or enhancing soil productivity.*

Level 1 Monitoring occurred during the project planning phase of a number of projects to determine if soils standards and guidelines (S&Gs) were considered and incorporated into the design of the project. These were primarily the vegetation management projects described under Monitoring Item 18. Others included Jack, Haypen, Knucklehead, and Beaver Creek. All planning efforts completed during FY 97 recognized existing soil conditions and the likelihood of affecting them as a result of management activities. With mitigation measures and Best Management Practices (BMPs) in effect, disturbance will be within standards.

Level 2 Monitoring occurred during the contract/permit administration of all active projects to determine if soil productivity S&Gs were implemented. Projects were monitored by timber sale administrators, project managers, and contracting officer's representatives. Corrective action was taken where S&Gs were not being properly implemented. Examples include Lower Montane and Blue Timber Sales.

Level 3 Monitoring occurred during post-project field review by interdisciplinary teams and specialists to determine if S&Gs were properly implemented. Level 3 monitoring occurred on the following projects:

Bear Scatter Salvage, Red Pine, Little Eagle, Boundary Fire Salvage, Dark Horn, Texas Heat Natural Fuels, Biomass, Lower Montane, Curran, Crunch, Ironside Fire Salvage, Three Cent.

In general, implementation of soil productivity standards was as designed on most projects. On the Boundary Salvage Sale, ground skidding occurred on slopes greater than 30 percent. Subsoiling on the Dark Horn Sale was halted because of equipment limitations. The project will be completed by a separate contract.

Projects monitored for effectiveness are the same as those listed under Level 3 implementation monitoring. In general, practices implemented were effective in meeting soil productivity protection S&Gs.

Two long-term cooperative studies (Blue Mountain Natural Resources Institute, PNW Research Station, OSU, Forest Service) have been implemented on the Forest partly to examine the effects of various management activities on soil productivity. The Limber Jim Fuel Reduction Study on the La Grande District is nearing completion. One component of the study is to determine impacts on soils caused by skidder/forwarder, harvester/forwarder, and cable systems to remove low value timber from relatively flat ground. Initial results indicate these types of operations do meet soil productivity protection standards. Some combinations of practices are less impactive than others. Final results will be available in FY 98. The Hungry Bob Study is just being started on the Wallowa Valley District and will examine the impacts of harvest and fuel treatments on soil productivity.

The Intermountain Research Station continued to monitor the Twin Lakes Fire to determine effects of high intensity wildfire on soil erosion rate, presence and persistence of hydrophobicity, and rate of vegetative recovery.

Recommended Action:

- Continue to monitor use and application of soil productivity S&Gs.
- Refine S&Gs through the Forest Plan Revision process where needed for such items as large downed wood and duff conservation.
- Modify S&Gs through the Forest Plan Revision process for use at the landscape level rather than solely by activity area.
- Continue to support the long-term studies and apply results to operations on the Forest.
- Apply revised soil productivity protection standards (to be in effect by 4/98).
- Rewrite definitions of soil damage categories and soil sampling procedures to make monitoring easier and more economical for field personnel. This will allow for monitoring more projects, provide more rapid feedback, facilitate restoration measures where needed, and promote better on-the-ground management.

W-W MONITORING ITEM 22
Air Quality

Purposes: *To determine if emissions from prescribed fire are managed within the requirements of the Clean Air Act. To ensure Clean Air Act requirements for the protection of Class I areas from the effects of air pollution are met.*

The primary considerations with emissions are the National Ambient Air Quality Standards for particulate matter (PM) that are established to protect human health. Existing PM10 (particulate matter 10 microns or smaller) standards have been in place for a decade; additional standards for PM2.5 were developed by the EPA and approved by the President in July, 1997.

1997 was the third year of implementation of the Memorandum of Understanding (MOU) among the Oregon Department of Forestry (ODF), Region 6, and the Department of Environmental Quality (DEQ). This interagency agreement provides the framework for the implementation of an innovative and effective air quality monitoring program. It is the basis of a smoke management plan for the Blue Mountain Forests. All burn units are registered and tracked through to completion with final estimates on emissions produced. As part of this program, ODF issues smoke dispersal forecasts to aid in planning and executing burn projects to minimize possible adverse health effects to local communities.

For the first two years of this program, DEQ-supplied equipment was installed on or about April 1 and removed around July 1 of each year. In 1997, the cooperators agreed to expand the monitoring season to October 1. The extension of the monitoring period permits the monitoring of any summer or fall impacts from fire management activities (prescribed burning and wildfire). Presumably this lengthened monitoring period will remain in future years.

The graphs following this narrative display the spring, summer, and fall burning period readings from the nephelometers located in Baker City, Enterprise, and La Grande. These readings reflect the increased use of prescribed fire in Northeast Oregon in 1997. Spring burning in the Blue Mountains peaked during the period of May 5-16. Burning on the Wallowa-Whitman was halted on May 10-11 because of high particulate levels from May 9, and because of the desire to reduce community impacts over Mother's Day Weekend. Burning resumed May 12, which recorded the highest emission reading for this period - 2.03 B-scat (B-scat is a measure of light refraction and is used to estimate particulate concentrations). While this is believed to be below both the new and old emission standards, it is a high enough level to cause discomfort for those at risk and a measure of sensitivity within the affected areas (Baker City).

The fall prescribed burning season also registered impacts in Baker City and La Grande due to a very stable air mass, significant acres burned on adjacent Forests (Umatilla), and treated acres near both communities. A 24-hr average of 2.79 B-scat was recorded on September 23 in Baker City, due to a strong night time inversion that pulled smoke into the community. Burning was curtailed to permit the airshed to mix out in subsequent days.

La Grande received notable impacts in mid-to-late October that resulted from a combination of circumstances, including local agricultural/residential burning and burning on nearby National Forest lands, both Umatilla and Wallowa-Whitman. Burning on the Wallowa-Whitman was halted on the evening of October 22 as a result of a stagnate air mass and increasing B-scat levels. The highest reading of the period (2.45 B-scat) occurred on October 25, three days after

burning was curtailed on National Forest land. The source of the impact is unknown; there is a possibility that the equipment may have malfunctioned due to negative values displayed on October 23.

All Forest Service burning in Northeastern Oregon was halted in early December because the prescribed burning emission cap of 15,000 tons was reached.

In summary, when impacts were registered at the monitoring sites, action was taken to manage the situation and reduce community impacts.

The Eagle Cap Wilderness and Hells Canyon Wilderness are Class I areas. Visibility is the only Air Quality Related Value (AQRV) that is currently being monitored for the Clean Air Act and Forest Plan compliance. The State of Oregon ERA is the government agency that has established and maintains the camera network used to measure visability effects. They have established a manual camera location on Pt. Prominence in the Eagle Cap Wilderness. The Forest supplies the lookout staffer who is responsible for taking pictures three times a day with the camera pointed at Burger Butte (Eagle Cap Wilderness), as well as maintaining a written observation log book.

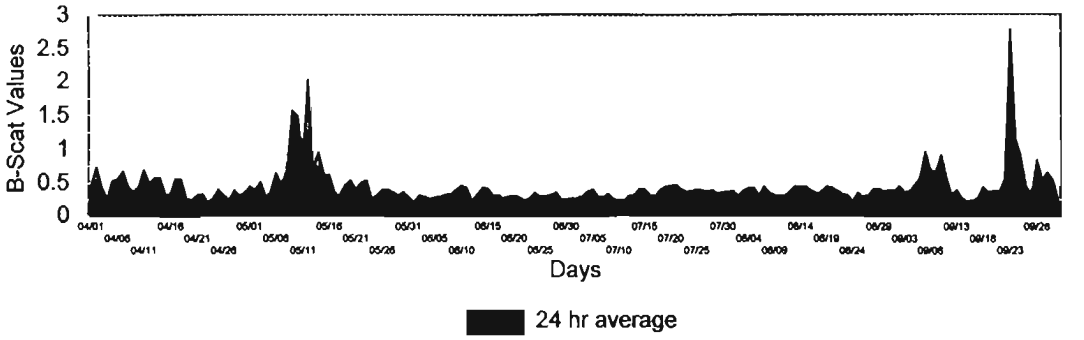
Additional visibility monitoring was begun at Mt. Fanny in 1997. However, the equipment malfunctioned and will need to be replaced in 1998.

Recommended Action:

- Continue to participate in the real time monitoring network. Continue the expanded time period the equipment is in use so as to monitor the fall burning period.
- Increase coordination with adjacent Forests so as to collaborate on burning activities that may affect Baker City or La Grande.
- Add filter monitors to help in correlation of B-scat to actual PM levels.
- Review consumption estimates with the MOU partners to ensure estimates are consistent.
- Institute the recommendations contained in the Forest's Air Quality Monitoring Plan to the extent the budget permits and the risks to AQRVs warrant.
- Implement the recommended rock art monitoring within Hells Canyon, using partnerships and/or grants where possible. There is a concern that air chemistry could impact these unique resources.

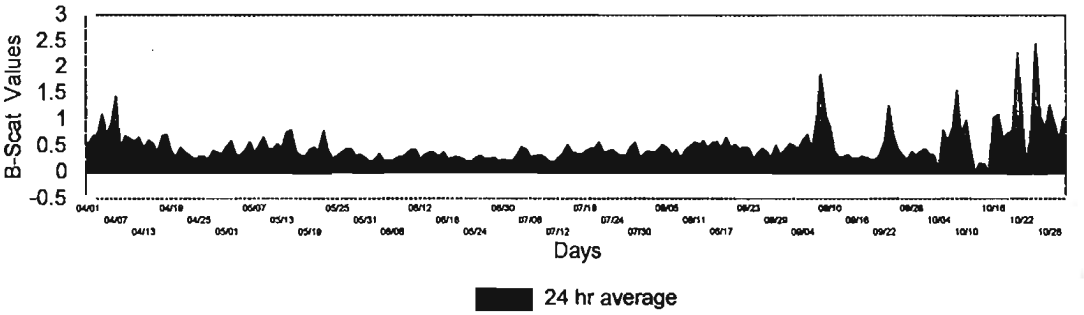
Baker City

24 HR Nephelometer



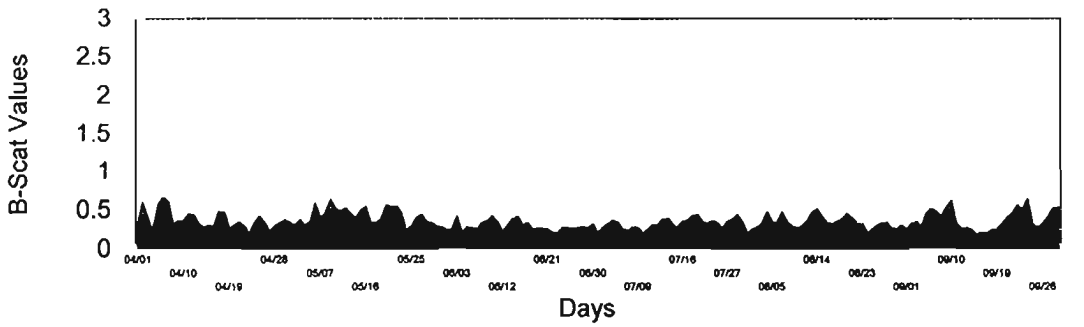
La Grande

24 hr Nephelometer



Enterprise

24 hr Nephelometer



W-W MONITORING ITEM 23
Fisheries Habitat

Purposes: *Ensure that Forest Plan targets for anadromous fish are being met. Determine if stream temperature and habitat restoration projects are effective in meeting aquatic habitat objectives as stated in the Forest Plan, Policy Implementation Guide, and Salmon Summit.*

A total of 63.5 acres of riparian habitat were planted. A total of 716 fisheries habitat structures were placed in streams. This compares with the Forest plan average annual projected output of 250 acres and 500 structures of fish habitat improvement work. The reduction in available funds for fisheries construction work resulted in postponement of some planned anadromous habitat work and reduced accomplishment.

Fish Habitat Projects:

Stream structure maintenance: 79 structures were repaired.

Stream Structure Monitoring: 573 stream structures were monitored across the Forest. Monitoring indicated 431 structures were functioning properly, 92 were partially functional, and 50 were non-functional.

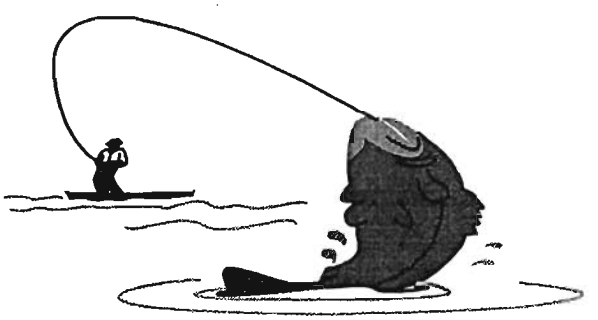
Riparian Plant Maintenance: Previously-planted and/or fenced riparian areas require care and maintenance. Forest personnel performed maintenance on 385 acres of riparian area.

Inventory of Fish Habitat and Fish Distribution:

Stream Inventory: The Forest surveyed 81 miles of stream habitat using the Region 6 Hankin and Reeves methodology.

Species Distribution Inventory: The Forest biologists conducted species inventories on 38 miles of stream habitat to determine species composition, distribution, and relative abundance. The primary purpose of the work was to assess bull trout distribution and abundance.

Recommended Action:
Continue to monitor.



W-W MONITORING ITEM 24
Anadromous Fisheries Consultation (chinook salmon, Snake River drainage)

Purposes: *To ensure that projects are being implemented under the terms and conditions of the Section 7 Biological Opinion (BO) agreed to with the National Marine Fisheries Service (NMFS) that result in a project being "not likely to adversely affect" listed species. To determine whether the prescribed modifications are effective in actually meeting the "not likely to adversely affect" criteria.*

Timber Sales:

Monitoring of six timber sales found that the projects were in compliance with the standards, guides, and mitigating measures prescribed in the EAs and BEs. No adverse effects occurred to PET (proposed, endangered, or threatened) species or habitat.

Snake River Fall Chinook Protection (Hells Canyon NRA):

Funding and fishery biologist involvement were provided to the USFWS and other cooperative agencies for this 1997 Snake River Fall Chinook Monitoring Project. Forty-nine redds were reported in the Snake River (aerial and ground-truthing methodology), and nine redds reported in the Snake River (>three-meter deep water sites), for a total 58 fall chinook redds counted in the Snake River. The Grande Ronde had 55, the Imnaha River had 3, and Joseph Creek had 1 redd(s) reported during the aerial surveys. A total of 189 Snake River fall chinook redds were reported above Lower Granite Dam in 1997. Thirty-one percent of these redds were counted in the Snake River, and 69% of these redds were observed in tributary streams (including the Grande Ronde, Joseph Creek, and Imnaha River).

The shallowest fall chinook salmon redd this year on the Snake River (due to high flows released by the Hells Canyon Dam) was 2.0 feet deep. In addition, the Snake River is a very large river so access to redds by boats is minimal. An employee of the USFWS has been watching the shallow gravel (potential redd sites) that receive high jet boat use, especially for docking. To date, no fall chinook have spawned at these high-use jet boat areas. In summary, the concern for jet boats on the Snake River impacting 1997 fall chinook salmon redds is not a valid concern at this time due to: the depth of redds (jet use would not affect this depth of redd); large river size vs. few roads and access to redds minimal by boats; and shallow potential redd sites heavily used by boats have not been used by fall chinook for spawning, to date.

Recommended Action:
Continue to monitor.

W-W MONITORING ITEM 25
Columbia River Basin Anadromous Fish Habitat Management Policy Implementation, PACFISH Requirements, and INFISH Requirements

Purpose: To ensure the actions identified in the PIG for the Columbia River Basin Anadromous Fish Habitat Management Policy, and the Standards and Guidelines for PACFISH and INFISH, are being implemented as planned.

Desired Future Conditions (DFCs): The Columbia River Basin Anadromous Fish Policy Implementation Guide (PIG) objectives were established in 1993. Approximately 90% of the DFCs for streams in anadromous fish habitat have been established. All Section 7 watersheds in the Snake River Basin that require endangered species consultation have DFC recommended in the biological assessments submitted to the National Marine Fisheries Service. The Upper Grande Ronde River, Catharine Creek, Upper Main Grande Ronde River, Middle Grande Ronde River, Middle Grand Ronde River, Wallowa River, Lostine River, Minam River, Big Sheep Creek, Imnaha River, Chesnimnus Creek, and Snake River all have DFC established in the biological assessments for the Section 7 consultation completed in 1994.

Stream Inventory: Stream inventory required by the PIG is approximately 98% complete. Stream inventory using a Level II Region 6 survey protocol was completed on 81 miles of anadromous and inland fish streams in FY 97. Approximately 2,100 miles of survey have been completed since 1989. This data resides in a Regional database which is accessible to biologists across the Region.

PACFISH Requirements: Fifty-seven Biological Evaluations (BEs) were prepared to ensure the protection of anadromous fish and aquatic resources for the following projects: mining (4), timber sales (17), recreation (7), range (8), and other (21).

INFISH Requirements: Forty-five BEs were prepared to ensure the protection of inland fish and their habitat for the following projects: mining (27), timber sales (4), range (4), recreation (4), and other (6).

Recommended Action:
Continue to monitor.

W-W MONITORING ITEM 26
Salmon Summit Action Plan Commitments

Purpose: *To ensure that commitments identified in the Salmon Summit Action Plan are being implemented in a timely manner.*

Riparian Acquisition Opportunities: No riparian parcels were acquired in 1997. The acquisition program is actively seeking and acquiring parcels in areas identified by the inventory that would benefit anadromous fish. The need to combine desirable parcels, willing sellers, and funding, results in a variable annual acquisition of lands.

Livestock Management: The Forest has a total of 79 active allotments that include riparian areas directly adjacent to anadromous fish habitat. One allotment is in the North Fork John Day River drainage and 78 are in the Snake River drainage. All of the Snake River allotments are administered to ensure that they are not likely to adversely affect endangered salmon as required by the Endangered Species Act (ESA).

Mining Management: The Forest has identified active mining operations that potentially may affect anadromous fish habitat. Two of these active operations were in the Upper Grande Ronde River section 7 watershed. The operations meet Forest Plan standards and guidelines and are closely monitored. Reclamation is not required because all work is within the channel prior to salmon spawning.

The Camp Carson mining site that threatened the Upper Grande Ronde River spring/summer chinook habitat and population received restoration treatment in 1997. The NMFS was extensively involved with evaluating and consulting on the removal of extensive overburden that threatened to slide into the area used by salmon. Monitoring of the site in 1996 resulted in the final work being completed in the summer of 1997.

Proper Functioning Condition (PFC) Analysis: PFC analysis was conducted on 99 miles of stream in the summer of 1997. The sample of streams was heavily weighted to meadow environments that are used for grazing wildlife, roads, and many other activities; these areas are the most fragile and have suffered resource damage in the past. Table V-6 shows the results of PFC analysis.

Table V-6
RESULTS OF PROPER FUNCTIONING CONDITION ANALYSIS
Wallowa-Whitman National Forest

PFC Category	Miles Analyzed	% of Sample
Non-Functional	3.2	3.3%
Functional at-risk with a downward trend	3.0	3.0%
Functional at-risk with no apparent trend	10.3	10.5%
Functional at-risk with an upward trend	28.2	28.5%
Proper Functioning Condition	54.2	54.7%
TOTAL MILES	99.0	100.0%

The PFC analysis indicates that about 83% of the sampled streams do not require any management change because they are either improving or already at potential. Those streams for which a trend could not be determined will require further examination and study to determine why they are not improving. Some of them have old railroad grades, roads, and mine tailings that prevent improvement through natural processes. Some of these may not be easily repaired.

The streams that were in a downward trend will have management changes to allow the streams to move toward Proper Functioning Condition. The nonfunctional sample was due to a flood event in one case and historic mine damage in another case. The stream miles in nonfunctional condition were determined to be beyond the ability of the Forest to repair, and they were not caused or regulated by any Forest action.

Diversion Screening and Constructed Barriers: The Forest has completed an inventory of existing diversions requiring screens. A total of 24 diversions were identified in 1994, and five needed screens to meet anadromous fish protection requirements. All of these diversions have been taken care of, except for Temperence Creek; consultation with NMFS for screening of Temperance Creek is ongoing and work is planned for 1998.

Recommended Action:
Continue to monitor.

W-W MONITORING ITEM 27
Old Growth

Purposes: *To compare acres retained in old growth, by management area, with Forest Plan target acres. To determine whether the number, size, and spacing of areas designated as old growth and pileated woodpecker feeding areas are being retained according to Forest Plan definitions and standards, and if they are being used by old-growth dependent species.*

Approximately 2,959 acres in MA 15 were surveyed during 1997. Of those surveyed acres, 1,180 acres (44%) met the old growth standards in the Forest Plan. The Forest-wide one-acre survey technique (originated by Pine RD) was followed. Since 1990, a total of about 32,844 acres of designated old growth areas have been surveyed. Only about 30% of these acres have met the Forest Plan old growth definition. Stands that did not meet standards were mainly deficient in large diameter trees, snags, and down logs. Many have had some partial timber harvesting in the past. In most cases, replacement stands are unavailable. Firewood cutting has reduced the value of some old growth stands, and wildfire has destroyed some designated old growth stands.

Because only about 30% of the allocated old growth meets the Forest Plan definition and replacement stands are not available, management requirements for old growth are not being met. Results indicate the threshold of variability has been greatly exceeded.

Recommended Action:

- Continue to implement Regional Forester's Forest Plan Amendment 2 to maintain all existing old growth forest stands in all allocations; this will maintain options for meeting the management requirements for managing old growth.
- Continue field surveys for designated old growth areas.
- Concerns associated with old growth management have been submitted to the Regional Forester as a potential issue to be considered in a Forest Plan adjustment. Evaluation of inventory results will be conducted in support of the Forest Plan adjustment process.

W-W MONITORING ITEM 28
Dead And Defective Tree Habitat And Primary Cavity Excavators

Purposes: *To determine if all sale activities will maintain snags at 100% potential population levels of primary cavity excavators. To determine if down logs greater or equal to 12 inches dbh are being left at an average of 20 pieces per acre in mixed conifer stands. In ponderosa pine stands, leave all large woody material. To determine baseline population numbers and trends.*

All sales were screened to meet direction in Regional Forester's Amendment 2. This direction requires that snags be retained at 100% potential population levels of primary cavity excavators. Approximately 8,850 acres covering 8 timber sales were surveyed. Of those acres surveyed, about 3,800 acres met the 100 percent level. On acres deficient in snags, KV snag creation projects were designed to mitigate those deficiencies. KV funding is not available on all projects; therefore, the threshold of variability is exceeded on those timber sales.

No estimates for down logs or green tree snag replacements were given. No surveys were conducted for use by primary cavity excavators.

Recommended Action:

- Obtain funding to provide for snag level survey over large analysis areas and track these through the post-sale process.
- Obtain funding to sample for primary cavity excavators to determine baseline populations and trends.
- Obtain proper funds to create snags where deficiencies exist.
- Implement mitigation measures in Forest Fuelwood EA.

W-W MONITORING ITEM 29
Pileated Woodpecker

Purposes: *To determine whether or not pileated woodpeckers are using designated habitat and feeding areas as planned. To determine population trends.*

Sampling for pileated woodpecker population levels was not funded and did not occur in 1997. There were no nest surveys or monitoring this year to determine trend. Foraging sign and sightings were noted during timber sale surveys.

Recommended Action:

- Continue to implement Regional Forester's Forest Plan Amendment 2 to maintain all existing old-growth forest stands, the 100% snag level, and adequate down logs.
- If pileated woodpeckers are going to continue to be used as management indicators, then both habitat and population monitoring needs to be completed. Without this information, the Forest can not confirm assumptions made about this species within the Forest plan.

W-W MONITORING ITEM 30
Goshawk Populations

Purpose: *To determine whether goshawks are using allocated old-growth habitat or nesting habitat in other allocations where considerations allow. To determine baseline populations and trends.*

All districts completed at least some goshawk monitoring in 1997. A total of 27 known nest sites and 4 general timber sale areas were surveyed. Of the known nest sites, none were found to be active. This is the first year of such poor goshawk productivity. The Forest believes this is due to cold and wet weather just after hatching.

No monitoring of goshawk prey species was conducted. Funding was not available to determine baseline populations and trends.

There is an inadequate level of monitoring to address the threshold of variability. Inventory on at least some timber sale areas is inadequate to ensure location of active nest territories. Without this inventory, the protection afforded by Amendment 2 is not realized.

Recommended Action:

- Survey for goshawks in each new timber sale analysis area since this action has the potential to modify existing habitat.
- Follow guidelines for goshawk habitat management outlined in Amendment 2.
- Survey for goshawk nest site occupancy and productivity Forest-wide.

W-W MONITORING ITEM 31
Pine Marten Populations

Purpose: *To determine if the old growth habitats (by management areas), subalpine forest, and lodgepole pine areas are available and being used by pine marten as planned.*

All districts, except La Grande, reported not having sufficient funds to complete any monitoring for martens. Therefore, the Forest can not determine populations, reproductive parameters, or habitat preferences.

The La Grande District completed winter track surveys in nine areas from December 1995 and March 1996, representing a variety of successional stages and plant associations. A total of 16 marten were detected. These were found exclusively in mature and old growth successional stages.

Evelyn Bull also continued her marten research in the Beaver Creek, North Powder, Dutch, Wolf, and Limber Jim watersheds. Track counts indicate a minimum of 26 marten in the study area, 13 of which are radio-collared.

Recommended Action:

- If the marten is going to continue to be used as a management indicator species, both habitat and population monitoring needs to be completed. Without this information, we can not confirm assumptions made about this species in the Forest Plan. Appropriate funding is necessary.
- Continue to implement Amendment 2 to maintain all existing old growth forest stands, the 100% snag levels, and adequate down logs.

W-W MONITORING ITEM 32
Elk Habitat/Populations

Purposes: *To assure standards and guidelines for hiding cover, thermal cover, forage, and open road density are being applied appropriately. To determine if elk numbers (22,350 post-harvest) and their corresponding management objective parameters are being maintained.*

Of the ten reported projects that appeared to have the potential to affect elk HEI (Habitat Effectiveness Index), four projects did not meet the HEI objective of 0.5. High road densities and low hiding cover continue to be the major cause of not meeting HEI objectives in those areas. Road closure effectiveness has been variable. Where road closures are not effective, elk habitat suitability is lower than the calculated values for the affected planning area.

Habitat work and associated monitoring were completed in the Dry Beaver-Ladd Canyon Elk Enhancement area in FY 97. Area closures were monitored, with very few violations occurring. Most violations occurred during the hunting season and included ATVs breeching berms and driving around gates. Prescribed fire was used on approximately 300 acres to enhance forage quality. Salting was done at 25 sites, 300 pounds of salt per site. Elk use was heavy at the majority of salting sites. Fourteen cages were constructed to protect 127 mountain mahogany seedlings, and effectiveness monitoring completed. Twenty-three collared cow elk were monitored by radio telemetry flights about every two weeks from spring through fall. Trend data indicate that elk are spending more time on public lands rather than private lands from spring through fall. A FY 97 Dry Beaver-Ladd Canyon summary report is on file at La Grande Ranger District.

Post-season elk numbers for 1997 for the Wallowa-Whitman units were 21,600 elk. This is slightly under management objective and within the established threshold. Summarizing all ten units, bulls per 100 cows averaged 8. This figure is below management objective of 12%, but is an improvement from last year. Calves per 100 cows averaged 33%, well below the objective of 43%. ODFW feels high cougar populations are affecting calf survival.

Recommended Actions:

- Expand the concept of the Dry Beaver-Ladd Canyon project to other important elk areas on the Forest.
- Set standards for each component of the HEI model (cover, road densities, spacing, and forage) by subwatershed.
- Evaluate the need to amend Forest Plan direction on HEI as directed in the Record of Decision.
- Emphasize the need to meet open road densities both during project activity and after projects. Where densities can not be met, emphasize the need to provide mitigation to meet resource objectives.
- Continue to monitor. Make recommendations to Oregon Department of Fish and Wildlife concerning harvest and seasons.

W-W MONITORING ITEM 33
Bald Eagles

Purposes: *To determine if the nesting, communal roosting, and associated foraging habitats are being identified and protected. To determine if individual site management plans are being developed. To determine if the young per occupied territory goals are being met.*

Two bald eagle nests were closely monitored on the Forest in 1997. Both sites have approved nest site management plans. The bald eagle nest on the Baker Ranger District produced two young. The Unity nest site was abandoned again this year, with no young being produced. It is unknown why abandonment is occurring.

Monitoring of winter roost sites were completed on the La Grande District from mid-December through March. Eagles observed on a given survey ranged from 0 to 10. Monitoring for eagles also occurred along the Snake River. Information is compiled by the Oregon Eagle Foundation and is available in an annual report. Only two of the Forest's four roost sites are covered by site plans. Consequently, the Forest is not meeting the 2-year requirement for developing roost site plans.

Long-term nest productivity is within the guidelines established in the Forest Plan.

Recommendations for protection of bald eagle roost sites were incorporated into the Snake River Wild and Scenic EIS and the Comprehensive Management Plan Biological Assessment.

Recommended Actions:

- Continue to monitor both nest and roost sites.
- Update the new Unity nest site plan in 1998.
- Develop a bald eagle management plan which will identify active and potential nest and roost sites and provide direction for management of these sites.
- Develop management plans for 2 roost sites.

W-W MONITORING ITEM 34
Peregrine Falcons

Purpose: *To determine if the nesting and associated foraging habitats are being identified and protected. To determine if individual site management plans are being developed. To decide whether potential nest habitats are identified and being managed to maintain suitability. To determine if the young per occupied territory goals are being met.*

Two successful nests were monitored on the La Grande Ranger District in 1997. Three birds were fledged from the two sites. Nest site plans have not been completed for either site, but drafts are now being worked on. Both of these nests were found in the last two years. Another nest site is located in the Hells Canyon Wilderness. Productivity in 1997 was two fledglings. A draft nest site plan has been written.

The three nest sites produced 5 fledglings, which is 1.7 young fledged per active nest. This exceeds the standard of 1.35 young per occupied site.

Approximately 18 potential nest sites were surveyed in 1997, with cooperative funding from Idaho Power. No active nests were found.

Recommended Actions:

- Continue to monitor all active nest sites and search for additional nests at each habitat identified to have good potential.
- Complete all draft nest site management plans for all three sites.
- Develop a peregrine falcon management plan which will identify all active and potential nest sites, and provide direction for management of these sites.
- Continue to monitor productivity in known nests.

W-W MONITORING ITEM 35
Sensitive Species

Purpose: *To determine whether species management guides for birds and mammals are being developed in a timely manner based on an established schedule.*

Protection of sensitive birds and mammals and their habitats has been through prescriptions developed during project-level planning. The effectiveness of these prescriptions and associated risks are documented in BEs.

To address species viability, it is necessary to evaluate population levels and address habitat needs at a scale larger than the project level. This can only be accomplished through development of a species management guide for each sensitive species. Before species management guides can be written, complete inventories and ecological information is necessary. No species guides have been written.

Surveys for Townsend's big-earred bat were completed on the HCNRA. The monitoring resulted in new distribution points for this species, as well as additional information on other bats.

Two historical upland sandpiper nest sites were monitored on the La Grande RD. One individual sandpiper was located.

Other studies that could provide some information on sensitive species are being conducted. A level II land bird survey of riparian areas is being conducted on private lands near the Wallowa Valley District. A portion of two routes are within the Forest's protection boundaries. Breeding bird surveys and Christmas bird counts have provided additional information.

Current budgets do not allow for monitoring at levels required in the Forest Plan. Monitoring is often accomplished by cooperative funding or when projects, such as timber sales, require monitoring.

Recommended Actions:
Continue basic inventories of sensitive birds and mammals when funding is available. Continue to monitor when there is adequate funding.

W-W MONITORING ITEM 38
MINERALS

Purpose: *To determine whether Standards and Guidelines (S&G) for minerals operations are responsible and effectivein providing resource protection. To determine whether the S&Gs are being implemented correctly.*

All plans of operation involving surface-disturbing operations were monitored throughout the mining season. Sporadic and weekend assessment operations were monitored at least once. Based on this monitoring, there were no cases reported in which resource objectives were not met.

Another level of monitoring includes S&G implementation monitoring as described in W-W Monitoring Item #2. Implementation of all S&Gs are reviewed. This level of monitoring continues to show that there are several S&Gs that cannot be met in the short term during placer operations. These standards include:

- Limiting detrimental soil conditions.
- Maintaining riparian and streamside vegetation.
- Giving preferential considerations to riparian-dependent species.
- Maintaining old growth qualities, including solitude.

Although these S&Gs may not be met in the short term, data is lacking to address whether resource objectives are being met. Reclamation plans are developed with the objective of meeting resource goals in the long term.

Concerns have been expressed about not having sufficient people to provide adequate input from resource specialists in the planning process.

There appear to be conflicts between certain S&Gs and allowing reasonable mining operations under the mining law.

Recommended Action:
The concern about possible conflicts between S&Gs and the mining law has been submitted to the Regional Forester as a potential issue to be addressed in a Forest Plan adjustment. Further evaluation will be needed. The adjustment process is currently on hold until the ICBEMP process is completed.

W-W MONITORING ITEM 39
Wilderness

Purposes: *To determine if wildernesses are being managed in accordance with the wilderness Act (P.L. 88-577) as amended. To ascertain if wilderness use levels are within the limits established for each Wilderness Resource Spectrum class. To summarize the physical/biological, managerial, and social setting of each Wilderness Resource Spectrum to assure their maintenance is consistent with the standards for wilderness management.*

Eagle Cap and Baker Ranger Districts reported.

Air Quality: Air quality is assumed to be good to excellent. See additional air quality discussion under Monitoring Item 22, page 5-23.

Soils: Visual observations show that overall displacement and erosion of soils resulting from human activity is occurring at a rate that approximates natural processes except at trailheads, trails, administrative sites, and popular campsites located primarily around lakes. The natural ecological actions and reactions appear to be functioning appropriately for the wilderness resource. There appear to be no adverse off-site effects; however, an increased amount of soil erosion and movement is occurring in the Sloans Ridge Fire Area of the North Fork John Day Wilderness.

Water Quality: Water quality appears to be in good to excellent condition but there have been some reports of giardia. The natural ecological actions and reactions appear to be functioning appropriately for the wilderness resource. No adverse off-site effects were identified. In the Eagle Cap Wilderness, a long-term temperature study is taking place on the Imnaha River, plus a quality data study on the Minam River; however, no conclusive results have been prepared. In the North Fork John Day Wilderness, short-term impacts to water quality occurred due to natural soil movement erosion in the Sloans Ridge Fire Area. Additionally, a riparian parcel of private land was acquired in the Eagle Cap Wilderness in 1997; this parcel includes about one mile of river habitat for steelhead, spring chinook, and bull trout.

Vegetation: Examples of vegetative losses from human activities are documented in all wildernesses. The loss, or substantial reduction, of the natural process of fire has probably caused the greatest impact on the vegetative component of the wilderness resource. The natural ecological actions and reactions appear to be functioning freely in wilderness with the exception of fire. No adverse off-site effects were identified. The introduction and spread of noxious weeds and invasive plants continues to be a concern and is considered one of the most prominent threats to preservation of the wilderness resource. A small number of popular campsites in the North Fork John Day Wilderness have more than 400 sq. feet loss of ground cover.

Scenery: Scenery is generally thought to be excellent within each of the wilderness areas. In the North Fork John Day Wilderness, recent fires have created a more diverse vegetative mosaic.

Livestock: Livestock grazing is permitted within all or portions of each wilderness, except the Baldy Unit of the North Fork John Day Wilderness. The Catherine Creek Allotment Management Plan for the Eagle Cap Wilderness was partially completed in 1997; the Catherine Creek allotment is only a small portion of the Eagle Cap Wilderness.

Fish and Wildlife: Natural ecological succession has been allowed to occur.

Evidence of Human Activity: Based on total acres, there is minimal evidence of human activity but it is present at the more popular sites. Especially within the North Fork John Day Wilderness, there is evidence of human activity that occurred before wilderness designation. Also, evidence of fire suppression can be seen in isolated areas.

Suppression action was taken on all reported fires in Eagle Cap Wilderness. No fires occurred in the North Fork John Day - Baldy Unit in 1997.

Social Setting: Based on field observations in the wildernesses, it is reasonable to assume that all wildernesses except portions of the Eagle Cap Wilderness are within Region 6 standards. Group size is estimated to be within standards for all wildernesses. Because campsites are often clustered at popular destinations and some parties voluntarily camp within sight and sound of other groups, there are probably situations where Region 6 standards are not met. There appears to be better compliance with holding stock 200 feet away from lakes and water than for holding stock away from camping areas and out-of-sight of trails. No significant concerns have been identified concerning pets.

Encounters within the North Fork John Day Wilderness increased in 1997 due to an influx of legal and illegal mushroom pickers.

Managerial setting: Wilderness education of groups, in person, and through bulletin board messages, continues to have a positive effect on the wilderness resource. Partnerships with Blue Mountain Council of Boy Scouts and NE Oregon Math and Science Teachers were established to further the teaching of wilderness ethics. It appears that although the public has limited contact with trail crews and law enforcement officers, contacts made are having a beneficial effect.

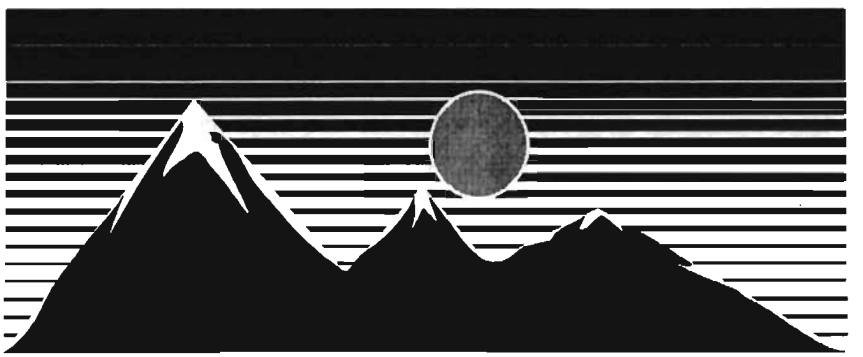
During the mushroom season, law enforcement officers and Forest Service personnel patrolled major trailheads and trails in the North Fork John Day Wilderness to contact illegal mushroom pickers. A number of Notices of Violation were issued and illegally-picked mushrooms confiscated.

Signing has been improved at some trailheads to address specific concerns and to provide better education. Funding did not allow for up to 50% of all wilderness trails to be maintained. Local service and user group maintenance of trails is increasing, but the backlog of trail maintenance continues to grow.

Wildernesses, for the most part, are being managed according to management direction and provisions of the Wilderness Act. The wilderness prescribed natural fire portion of the Fire Management Action Plan (Chap. 40) have been completed for all wildernesses on the Forest. WRS (wilderness resource spectrum) standards appear to be met in most cases.

Recommended Actions:

- Continue to monitor.
- Complete wilderness boundary marking and management plans for each wilderness, as outlined in the implementation schedules.
- Continue implementation of the Eagle Cap Wilderness Plan.
- Continue efforts to monitor and control noxious weeds.



W-W MONITORING ITEM 40
Wild and Scenic Rivers

Purpose: *To determine if designated rivers and associated river corridors are being managed in accordance with the Wild and Scenic Rivers Act. Also, to ensure that Forest Plan study rivers are managed so as not to jeopardize their potential eligibility, classification, or suitability for inclusion in the national wild and scenic rivers system.*

Eagle Cap and Baker Ranger Districts reported.

Wild and scenic river conditions have not been adversely affected by management activities. Natural processes are dominating. Monitoring results validate that designated river classifications of wild and recreational river corridors are being maintained to appropriate classification standards.

The NEPA process for recreation facility reconstruction and relocation was begun on and hazard trees were removed from roadside and recreation sites on the Lostine River. Additionally, a parcel of private land within the Eagle Cap Wilderness was acquired in 1997; this included about one mile of habitat for steelhead, spring chinook, and bull trout on the Minam River.

In the North Fork John Day corridor, emergency road maintenance and spot-rocking of the 7300-380 road were required to correct erosion damage and protect improvements from abnormally high run-off and sedimentation levels in the Sloans Ridge fire area.

Planning and implementation adequately addressed the protection of all significant river values.

Ongoing illegal prospecting continues to be a problem. Monitoring results validate that the North Power Wild and Scenic River is being maintained to appropriate standards, as is the Dutch Flat Wild and Scenic Study River.

Recommended Action:

- Continue to monitor.
- Continue to find alternate sources of funding and develop new partnerships to fully implement the wild and scenic river plans.
- Increase law enforcement in North Fork John Day in order to curtail illegal mining activities.

W-W MONITORING ITEM 41
Recreation Setting

Purposes: *To determine whether Forest settings with desirable recreation attributes are being managed to provide high quality and stable opportunities for outdoor recreation. To monitor recreation developments in order to ensure that they are maintained to a standard that provides for customer satisfaction. To provide assurance that physical, social, and managerial attributes are maintained at levels identified in the Standards and Guidelines (S&Gs).*

Eagle Cap, Baker, and Pine Ranger Districts reported.

Overall, the results of monitoring are acceptable. The Forest appears to be providing a wide range of recreation opportunities to the general satisfaction of users. Use of the Forest by recreationists is growing; however, the positive comment most often heard continues to be that visitors appreciate the solitude provided by the Forest's sites and facilities. S&Gs are being met, but services at developed sites, including water and garbage pickup, are reduced due to budget deficiencies. Also, maintenance and operation of facilities overall is deficient, leading to lower quality sites and some resource damage.

Rating of quality of sites averaged four on a scale of one (low) to five (high). Most positive comments centered on Forest Service contacts, hazard tree removal, primitiveness of the area, lack of crowds, and scenery. Negative comments related to growing use, lack of horse camps, horse manure in the campground, and need for more timber salvage.

Many of the recreation facilities on the Forest are located along streams. Forest specialists are working to mitigate conflicts where necessary and providing a more appropriate level of visitor education about anadromous fish protection.

Recommended Action:
Continue to monitor.

W-W MONITORING ITEM 42
Off-Road Vehicle Use

Purposes: *To see if Forest settings with desirable recreation attributes are being managed to provide high quality and stable opportunities for off-road vehicle use. To determine if there are conflicts with other recreation or other resource management objectives.*

Eagle Cap and Baker Ranger Districts reported.

Off-road vehicle use is occurring at various levels and in various ways across the Forest. Off-road vehicle use is slowly increasing, but management of the use is meeting the intent of S&Gs. All-terrain vehicle use is primarily meeting the intent of the S&Gs, but as use increases, so do concerns about effects on other resources, including wildlife and heritage.

Users sometimes stray onto closed trails entering the Eagle Cap Wilderness, and into the Wilderness itself. In cases where trails leading into the Wilderness are not closed outside the Wilderness boundary, conflicts may occur with horse users heading for the Wilderness.

There is evidence that road closures are being breached on Baker RD and adversely affecting long-term soil productivity and water quality in very localized areas not exceeding 1% of the District land base. Heritage resources are being impacted to a minor degree at a specific site in Washington Gulch.

Recommended Actions:
Continue to monitor. Continue efforts on several of the units to provide high quality off-highway vehicle opportunities in a designated and controlled setting.

W-W MONITORING ITEM 44
Cultural And Historic Site Protection, Rehabilitation, And Interpretation

Purpose: *To determine if activities are designed to protect National Register characteristics of unevaluated and significant cultural resource properties as stated in the Forest Plan. To assess whether appropriate stabilization rehabilitation, or mitigation of damaged sites eligible for inclusion in the National Register of Historic Places is being done as stated in the Forest Plan. To assure protection/mitigation measures are effective in meeting cultural resource management objectives. To determine whether survey methods are adequate to identify all locatable sites.*

All seven Ranger Districts reported on this monitoring item this year. A total of 446 cultural sites were visited in FY 97. All of these were located where potentially impacting activities have occurred. None of the sites were impacted.

Recommended Action:
Continue to monitor.

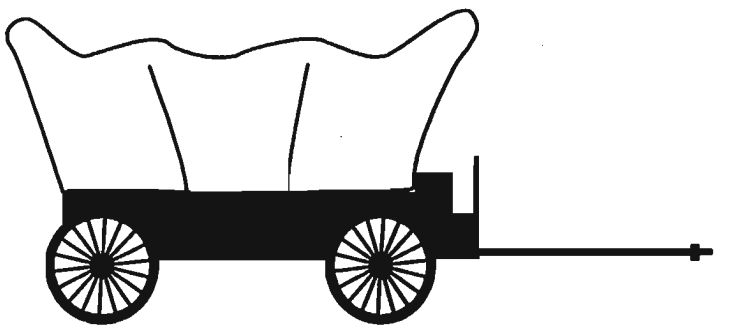


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Table V-7
FOREST ACCOMPLISHMENTS - FY97
Wallowa-Whitman National Forest

The following table provides a summary of selected Forest accomplishments and resource outputs for FY97. Where possible, these are compared to Forest Plan estimates, but in many of the cases the unit of measure has changed since the Forest plan was completed and direct comparison is no longer possible.

RESOURCE ACTIVITY/OUTPUT	UNIT OF MEASURE	FOREST PLAN PROJECTION (avg/year)	ACTUAL FY97 FOREST OUTPUT	% ACTUAL TO FOREST PLAN
FIRE				
Natural Fuel Treatment	M Acres	22.4	7000	NA
Activity Fuel Treatment	M Acres	(total combined)	4982	NA
FISH				
Anadromous Stream Restored/Enhanced	*	250 acres	17 miles	*
Inland Stream Restored/Enhanced	*	500 structures (Anad/Inland combined)	1 mile	*
RANGE				
Permitted Grazing - Sheep & Goats	*	186 M AUMs	30..4 M Head Months	*
Cattle & Horses	*	(total livestock)	102.3 M Head Months	*
Non-structural Improvements	Acres	Not Specified	45	NA
Structural Improvements	Structures	Not Specified	97	NA
Noxious Weed Treatment	Acres	400	1,207 gross	301%
RECREATION				
Trail Construction/Reconstruction	Miles	4	6	150%
Developed Recreation Capacity	M PAOTs	661		
ROADS				
Construction	Miles	249	2	NA
Reconstruction	Miles	(C/RC Combined)	103	NA
Obliteration	Miles	Not Specified	83	NA
THREATENED, ENDANGERED, and SENSITIVE SPECIES				
Aquatic Habitat Restored/Enhanced	Miles	Not Specified	1	NA
Terrestrial Habitat Restored/Enhanced	Acres	Not Specified	28	NA
TIMBER				
Total Program Sale Quantity	MMBF	205	49	24%
Reforestation	Acres	14,300	7,286	51%
Timber Stand Improvement	Acres	7,400	2,769	37%
WILDLIFE				
Habitat Restored/Enhanced	Acres	1,000	20,348	
Habitat Structures	Structures	Not Specified	1,169	NA
WATER				
Watershed Improvements	Acres	1000	461	46%

* Unit of measure changed between FY90 Forest Plan and FY97 Accomplishment Report.

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FOREST PLAN AMENDMENTS

Only one non-significant Forest Plan Amendment was prepared on the Wallowa-Whitman National Forest in FY 97.

Amendment Number	Date	Summary and Comments
21	4-8-98	Documents the preferred alternative for the Spring Creek Restortion Project on the La Grande Ranger District. The Amendment provides for the treatment of Riparian Habitat Conservation Areas (per PACFISH), necessitating a site-specific Forest Plan Amendment.

Amendments 22 and 23 were included in the 1996 report (executed in December 1996).